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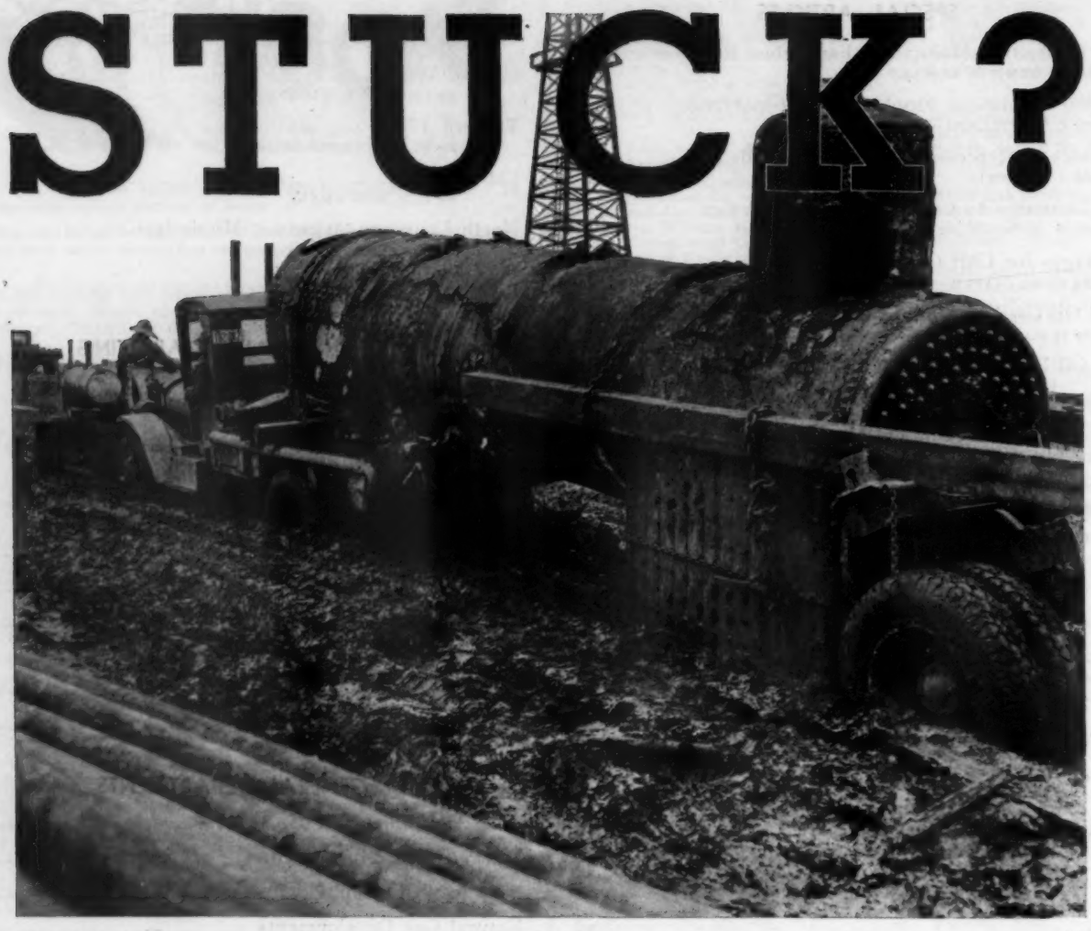
STUCK?



NO, the driver even dared stop right in the mud-hole to let the photographer shoot this comparison between wheels that sink and tracks that don't! Stopped with full knowledge that his "Caterpillar" track-type Tractor could immediately pick up the load and walk ahead on this typical oil-field "road"! Confidence in their power and traction has put whole fleets of "Caterpillars" into the world's oil-fields.

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Crude Oil Production Is Being Maintained Far Below Estimated Domestic Requirements

By ANDREW M. ROWLEY

CRUDE oil production in the United States is averaging considerably below the estimate of requirements made last month by the committee on economics of the American Petroleum Institute. That committee figured the need for domestic crude oil during July would average 2,352,500 barrels daily. Requirements for the quarter including July, August and September were estimated at an average of 2,365,100 barrels daily. July started with an average slightly under 2,100,000 barrels. While the output probably will register an increase this week, the average still will be far below that estimated as necessary for requirements. This estimate of requirements included 32,000,000 barrels of imported crude oil for the last nine months of this year.

Imports of crude oil have not registered much of a decline since the excise tax went into effect, indicating the 21 cents a barrel tax does not shut out this foreign produced crude. All of which makes the producer of crude oil in the United States, who has curtailed his output so far below requirements, feel he is entitled to a better price. This condition is especially true in the Mid-Continent area where the period of low prices has prevailed for so long and where crude oil is being and has been withdrawn from storage in large quantities.

Consumption is holding up better than had been expected. The season of maximum demand is under way. The production situation is stabilized and no substantial increase in crude oil production is expected. Orders have been issued covering the East Texas situation until September 1. Producers who have done so much to bring about this desirable condition should be given a reward for their efforts in the form of better prices and now is a good time for such action upon the part of the purchasing companies.

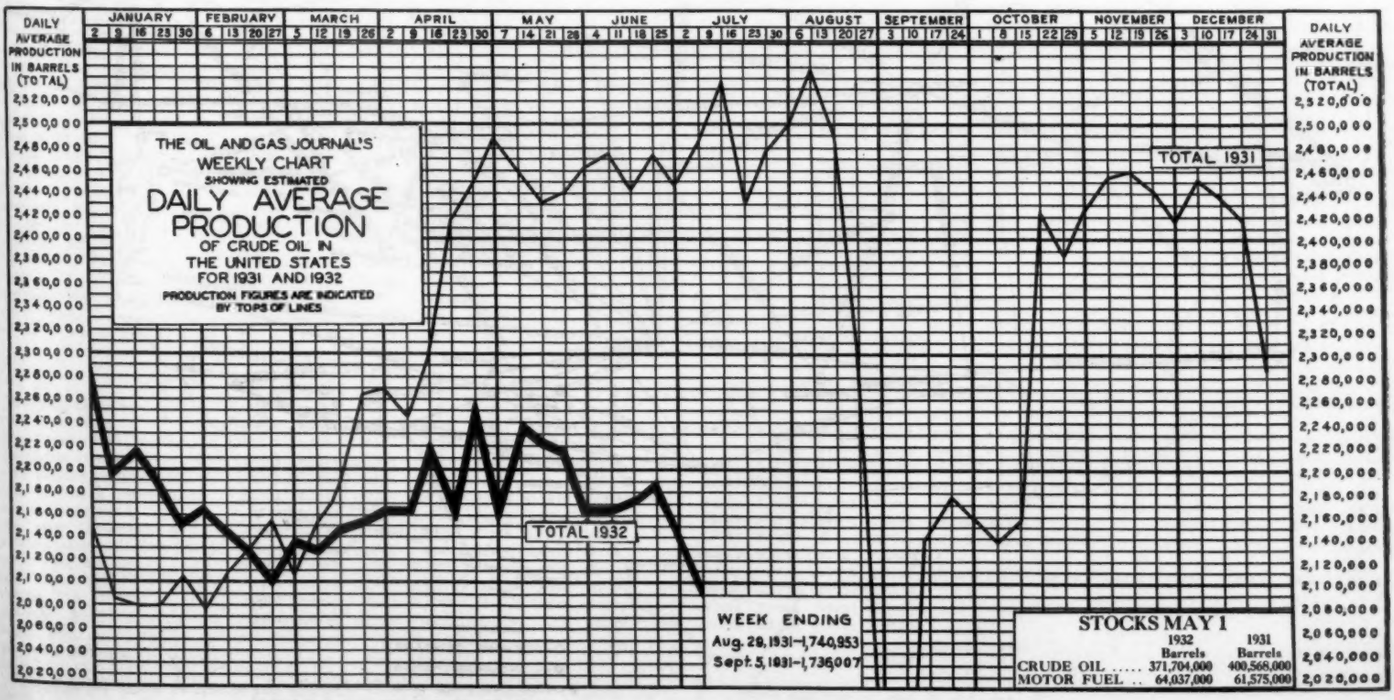
Fears that higher crude oil prices would result in a big drilling campaign are based on the supposition someone would open another East Texas or Oklahoma City. The history of the industry belies such an assumption. And the industry must face the fact sooner or later it is away behind in its drilling and the time is coming very quickly when it will have to develop future reserves.

Crude Oil Production in the United States

Estimated daily average production for the week ending July 2, and a comparison with previous week and one year ago, follows:

	July 2	June 25	July 4, 1931
Oklahoma—			
Oklahoma City	65,930	97,865	214,445
Seminole-St. Louis	109,415	114,320	136,560
Remainder of State	211,170	214,250	239,955
Total Oklahoma	386,515	426,435	590,960
East Texas—			
Lathrop	125,495	125,046	94,950
Kilgore	102,987	102,655	144,648
Joiner	104,524	104,111	112,374
Total East Texas	333,006	331,812	351,972
West Texas	179,206	178,962	206,772
North Central Texas	74,912	74,794	87,665
Texas Panhandle	54,925	55,836	66,792
East Central Texas	57,415	57,348	60,643
Gulf Coast Texas	110,643	111,829	126,921
Southwest Texas	57,731	57,593	64,079
Total State of Texas	867,838	868,174	964,844
Kansas	96,845	98,235	102,890
North Louisiana	30,190	29,835	35,955
Gulf Coast Louisiana	31,102	31,904	30,150
Arkansas	34,095	34,025	43,915
Eastern fields	120,000	121,000	108,000
Rocky Mountain area	80,429	80,273	98,961
California—			
Santa Fe Springs	57,500	56,750	62,000
Long Beach	67,000	69,000	75,500
Playa Del Rey	14,500	15,000	24,500
Elwood	13,800	14,000	26,000
Kettleman Hills	60,000	58,950	67,000
Remainder of State	238,700	246,300	252,750
Total California	451,500	460,000	507,750
Total United States	2,098,514	2,149,881	2,483,425

Decrease, 51,367 Bbls. Daily



Changing Conditions Emphasize Significance of Transportation in Oil Industry's Profits

By C. O. WILLSON

The transportation of crude oil and petroleum products due to changes within the oil industry is rapidly becoming a dominant factor in the efforts of individual companies to show adequate profits in their operations.

Developments over the past year indicate that the time is permanently past when integrated companies can show sufficient profits in their production, refining or marketing departments so that they can overlook competitive disadvantages in the transportation of raw material and refinery products. Efficiency has reduced costs and brought low prices and, coupled with widespread competition, has done away with the opportunity for large profits in production and refining regardless of how fortunate the operating position of individual companies may be.

Due to these low prices there are many consuming points in the United States in which the total transportation charge represented in the consumer quotations is greater than the refinery return which is supposed to cover the cost of finding, producing and refining crude oil into finished products. This condition accounts for the fact that five large gasoline pipe line systems have been completed and placed in operation over the past two years serving an area which requires two-thirds of the gasoline consumed in the United States. These lines, which were built so that part of the normal transportation charge would accrue to the shippers, have an aggregate capacity of 110,000 bbls. daily, which means that approximately 10 per cent of all gasoline consumed in United States is transported at least part of the distance between refineries and consuming points by pipe line. At the same time more and more attention is being given to the use of inland waterways in the movement of petroleum and its products, while the increasing use of trucks in short hauls has forced railroads at many points to materially lower their freight rates.

The increasing importance of transportation as one of the four major phases of oil operation is illustrated in the following table based on gasoline prices for six-year periods at Indianapolis, starting in 1920 (rail rate is from Oklahoma and refinery prices are f.o.b. Oklahoma plants):

	Cents per gallon	% of total
JUNE, 1920		
Tax	0	0
Marketing	3.28	11.5
Rail rate	2.772	9.9
Refinery price	22	78.56
Total	28	100
JUNE, 1926		
Tax	3	12.4
Marketing	7.928	32.8
Rail rate	2.772	11.4
Refinery price	10.5	43.4
Total	24.2	100
JUNE, 1930		
Tax*	5	27.2
Marketing	5.496	29.8
Rail rate	2.904	15.8
Refinery price	5	27.2
Total	18.4	100

*State and Federal.

The year 1920 was a period of relatively high prices for gasoline and all other refinery products. At that time, it will be noted in the table, the rail rate from Oklahoma to Indianapolis was 9.9 per cent of the price paid by the consumer for gasoline. With no change in the rail rate the percentage jumped to 11.4 per cent of the consumer quotations, due to the fact that the consumer price decreased. By June of this year the rail rate percentage of the consumer price had jumped to 15.8 per cent, due both to a decline in the consumer price and also an increase in the rail rate.

Refinery Prices Lower

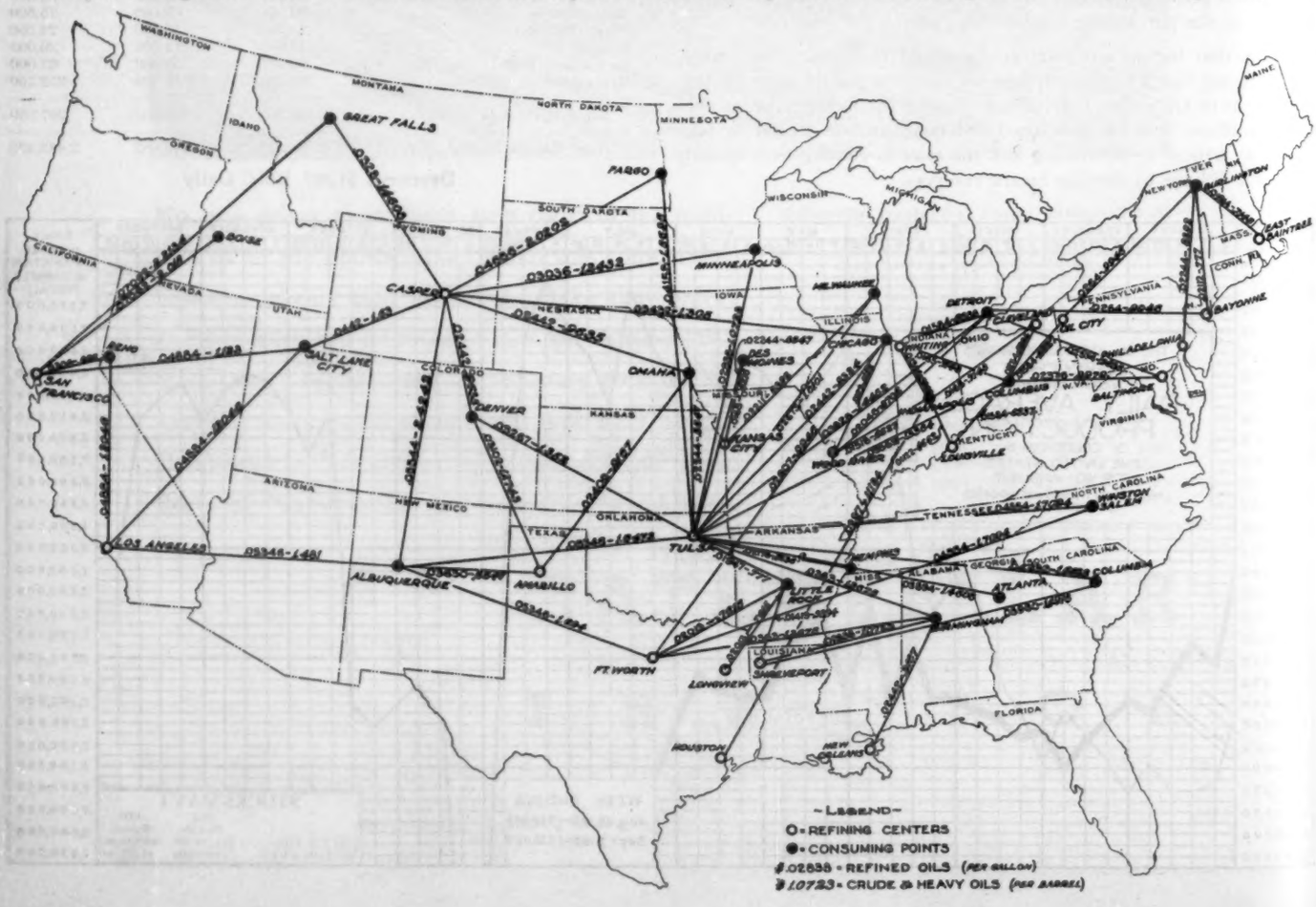
In contrast to the situation in regard to the rail rate, it will be noted that the refinery price, which represents the producing and refining branches, part of the consumer quotation, decreased in amount and percentage of total. In June, 1920, Oklahoma refiners were getting 22 cents per gallon for a regular grade of domestic gasoline and this amounted to 78.6 per cent of the consumer price. By June, 1926, this price had decreased to 10.5 cents and this amounted to 43.4 per cent of the consumer price. Refinery prices have shown a fairly consistent decline since 1926, and in June of this year 5 cents was the going market, and this was 27.2 per cent of the consumer price.

The relative situation in Indianapolis over the past 12 years is representative. It was chosen for the illustration because it is centrally located without any refineries nor is it near any important producing properties. Although shipments have been steadily decreasing, considerable quantities of Oklahoma gasoline are still sold to buyers in and near Indianapolis.

Importance of Tax

Attention is called to the changing situation in regard to taxes and marketing costs, both of which have significance in the efforts being made to reduce operating costs. The tax was not a factor in the gasoline market at Indianapolis during 1920. By June, 1926, a 3-cent state tax had become effective and this accounted for 12.4 per cent of the consumer price. By June of this year another cent had been added to the state levy and on June 21 a Federal tax of

Map Showing Rail Rates on Crude Oil and Refinery Products From Representative Refining Centers to Consuming Points



1 cent became effective, making a total tax of 5 cents, which was 27.2 per cent of the total price. The amount is the same as the refinery price, showing that the State of Indiana and the Federal government are now getting as much out of a gallon of gasoline at Indianapolis as the oil industry does at its Oklahoma refineries. The situation at Indianapolis in regard to tax is typical for the United States, the average tax being slightly in excess of 5 cents.

It will also be noted that while the refinery revenue has shown a steady decline, marketing costs have mounted, although over the past year there has been a trend toward narrower margins between the delivered tank car and retail prices at points of consumption. The 7.928-cent marketing figure shown for June, 1926, was greater than the average at that time, although spreads were exceptionally wide during 1926. This development reflected a condition in which there was a rapid expansion of all types of service stations. This overexpansion resulted in a duplication of facilities and reduced gallonage per unit which has meant higher costs per gallon of products sold.

This increasing cost of taxes and marketing has emphasized the desirability of reducing transportation charges. High taxes add to marketing costs and the spread of evasion is a constant menace to price structures as established by the major companies. There is now a general recognition that narrower margins for marketing are inevitable in order to strengthen the competitive position of the major distributors and individual companies have been considering ways and means of bringing this about.

Refinery Prices

Any study of this problem must inevitably reach the conclusion that additional reductions in the refinery price on gasoline are not possible. The constant chiseling of this price over the past few years will end with a return to more normal conditions in the oil business and higher rather than lower prices are to be expected. As previously stated this refinery price is supposed to be high enough to represent a profit to all phases of business from the lease to the refinery tank car, including the transportation charge from the field to the refineries. A price basis of 5 cents f.o.b. Oklahoma refineries does not adequately cover the cost of these operations plus a return on investment, for a large part of the oil business. The price is partially a reflection of the unsettled crude oil market over the past three years and a highly competitive situation among refiners who have striven for volume rather than immediate profits.

WESTERN FREIGHT RATES

Refining centers—	To consuming centers: Salt Lake City (1)	Salt Lake City (2)	Reno, Nev. (1)	Reno, Nev. (2)	Boise, Idaho (1)	Boise, Idaho (2)	Great Falls, Mont. (1)	Great Falls, Mont. (2)
San Francisco	.04884	1.123	.03036	.895	.07062	2.018	.07062	2.2134
Los Angeles	.04884	1.2046	.04884	1.2046	.07062	2.018	.07062	2.2134

1. Rates per gallon on refined oils (gasoline, naphtha and kerosene.)
2. Rates per barrel on heavy oils (fuel oil, gas oil and crude oil).

Restricts Outlets

Thus, the average company feels that any reduction in overall costs cannot come in the future from its producing and refining operations and for that reason they are looking to the possible savings in transportation. The executive heads of several companies have stated that unless they are able to reduce transportation costs they will be compelled to withdraw from certain areas which they have always considered a part of their marketing territory. In these sections they are moving their gasoline and other products over long distances at the relatively high rail rates and endeavoring to compete with companies whose transportation is largely by pipe line and water movement.

Indianapolis can also be used as showing the workings of this transportation situation. Gasoline is shipped regularly into Indianapolis from nearby refinery centers of Whiting, Ind.; Wood River, Ill.; Toledo, Ohio, and Louisville, Ky. These points, due to the substantially shorter hauls, have lower freight rates than Oklahoma refiners. The advantage in the case of Wood River is 1.386 cents per gallon; Whiting, 1.518 cents; Toledo, 1.452 cents, and Louisville, 1.782 cents. Thus the net back to the refineries located at these points based on a 5-cent Oklahoma (Group 3) price for gasoline is as follows:

	Cents
Wood River, Ill.	6.386
Louisville, Ky.	6.782
Whiting, Ind.	6.518
Toledo, Ohio	6.452

This, of course, does not mean that these refiners have full advantage of the freight rate differential. The refiners located at the points mentioned have a much larger pipe line transportation charge in the movement of the crude oil from the fields to the plants to consider in their refinery operating charge. The actual advantage of the refiners located near Indianapolis probably does not amount to more than a small fraction of a cent, but in these days of low prices this advantage may represent the difference between a profit and loss in the operations of the companies concerned.

Gasoline Pipe Lines

There is no gasoline pipe line serving Indianapolis, although at least two or three projects which would include Indianapolis have been considered. Figured on the rail charge of 2.904 cents per gallon for gasoline and kerosene, the charge per barrel is $1.22. Provided a sufficient volume of material was available there can be no question that a pipe line could be operated at the $1.22 per barrel figure which would show a high yield on the investment.

One of the gasoline pipe line systems which has been in operation over the past year connects to Chicago as one of its largest terminals. The freight rate to Chicago on gasoline is 2.442 cents per gallon, or $1.026 per barrel. The general policy of the gasoline pipe line companies has been to charge approximately the same as the railroads in the transportation of gasoline regardless of whether the movement is entirely by rail or a combination of rail and pipe line. Whatever saving goes to the shippers accrues in the form of profits to the pipe line company.

No figures are available as to the cost of operating gasoline pipe lines and the possible savings when compared with rail costs. In general, this varies directly with the distance and volume of business available. As in the case of crude oil the cost per gallon in pipe line shipments decreases when a large volume of liquid is moved over long distances continuously. However, these gasoline pipe lines have been operated long enough to assure that they have a permanent place in the industry and warrant general consideration by all major companies endeavoring to work out methods of lowering their transportation costs. It is certain that additional lines will be built in the near future. The main concern of companies considering the construction of these lines is the matter of securing enough outlets at the destination points to assure the capacity operation of the line at all times. Investigations have shown that where this capacity operation is not possible, the construction of the line usually is not justified. This situation has led to the consideration of cooperatively owned and operated lines among refiners. The largest gasoline line is operated on that basis.

Some who have made a study of the gasoline pipe line situation are predicting a network of lines connecting to the major consuming points throughout the Middle West and East supplementing the crude oil lines extending from the Mid-Continent fields to the major refineries located in this same territory. In some cases, it is predicted, that individual companies will find it expedient to build branch crude oil lines connecting to the trunk lines and new refineries will be built at important consuming centers. Whether this plan is more desirable than the gasoline line depends on the position of individual companies, the market for products other than gasoline, distance and volume of material available.

Water Movement

Closely allied with the efforts being made to lower transportation costs through all types of pipe line movement is the expansion of water movement. Some of these companies move large quantities of material along the coast, including both crude oil and refined products. The savings in these movements are large when compared to any other method of transportation particularly at this time when oil tankers are available at the lowest rates in marine history.

Several of these companies are supplementing the coastal movement with smaller shipments from refineries to bulk

(Continued on Page 16)

Representative Freight Rates on Crude Oil and Refinery Products to Consuming Centers

Refining centers—	Chicago 1	Chicago 2	Columbia, Ohio 1	Columbia, Ohio 2	Des Moines 1	Des Moines 2	Detroit 1	Detroit 2	Fargo, S. D. 1	Fargo, S. D. 2	Indianapolis 1	Indianapolis 2	Milwaukee 1	Milwaukee 2	Minneapolis 1	Minneapolis 2	Omaha, Neb. 1	Omaha, Neb. 2	Burlington, Vt. 1	Burlington, Vt. 2
Group 3 (Tulsa)	.02442	.9324	.03564	1.3364	.02244	.8547	.03828	1.4452	.04158	1.5695	.02904	1.0878	.02673	1.0101	.02838	1.0723	.02244	.8547	.05082	1.9114
North Texas (Fort Worth)	.02607	.9946	.03729	1.3986	.02409	.9167	.03993	1.5074	.04323	1.6317	.03069	1.15	.02838	1.0723	.03003	1.1344	.02409	.9167	.05247	1.9736
East Texas (Longview)	.02607	.9946	.03729	1.3986	.02409	.9167	.03993	1.5074	.04323	1.6317	.03069	1.15	.02838	1.0723	.03003	1.1344	.02409	.9167	.05247	1.9736
Texas Panhandle (Amarillo)	.02607	.9946	.03729	1.3986	.02409	.9167	.03993	1.5074	.04323	1.6317	.03069	1.15	.02838	1.0723	.03003	1.1344	.02409	.9167	.05247	1.9736
North Louisiana (Shreveport)	.02442	.9324	.03564	1.3364	.02442	.9324	.03828	1.4452	.04356	1.6472	.03069	1.15	.02673	1.0401	.03036	1.150	.02442	.9324	.05082	1.9114
Arkansas (El Dorado)	.02442	.9324	.03564	1.3364	.02442	.9324	.03828	1.4452	.04356	1.6472	.02772	1.0567	.02673	1.0101	.03036	1.150	.02442	.9324	.05082	1.9114
Texas Gulf (Houston)	.0264	.9946	.03729	1.3986	.02607	.9946	.03993	1.5074	.04521	1.7094	.0297	1.1189	.02871	1.0878	.03201	1.2121	.02607	.9946	.05247	1.9736
Louisiana Gulf (New Orleans)	.0254	.9635	.03564	1.3364	.03399	1.6006	.03828	1.4452	.....	.....	.02904	1.0878	.02772	1.0567	.03531	1.6628	.0363	1.7094	.05082	1.9114
Kansas City, Mo.	.0198	.7459	.03234	1.2121	.0165	.6216	.03498	1.3209	.03696	1.3986	.02442	.9167	.02211	.8392	.02376	.9013	.0165	.6216	.04884	1.8337
Wood River, Ill.	.0122	.5128	.01914	.8081	.02607	.9167	.02046	.8702	.....	.....	.01518	.6537	.01711	.7207	.02112	.9946	.02013	.9479	.03762	1.4297
Whiting, Ind.	.00198	.0832	.0165	.7148	.02112	.9946	.01584	.6838	.03531	1.6628	.01386	.5905	.00759	.3188	.02013	.9479	.02376	1.1189	.033	1.2432
Toledo, Ohio	.0165	.6930	.01188	.4975	.....	.....	.00528	.2218	.....	.....	.01452	.6216	.01815	.7623	.02904	1.2197	.....	.....	.02772	1.0567
Cleveland, Ohio	.01815	.7623	.01254	.5284	.....	.....	.0132	.5594	.....	.....	.0165	.7148	.02013	.8455	.03036	1.2751	.....	.....	.02646	.9946
Pittsburgh, Pa.	.02046	.8593	.01386	.5905	.03267	1.4242	.0165	.7148	.....	.....	.01848	.777	.02178	.9148	.03267	1.3721	.03828	1.7018	.02772	1.0567
Oil City, Pa.	.02046	.8593	.01584	.6527	.03267	1.4242	.0165	.7148	.....	.....	.01914	.8081	.02178	.9148	.03267	1.3721	.03828	1.7018	.0264	.9946
Louisville, Ky.	.....	.....	.01584	.6527	.02442	1.1054	.01782	.7459	.....	.....	.01122	.4662	.02013	.8455	.....	.....	.033	1.4784	.03366	1.2743
Philadelphia, Pa.	.....	.....	.02442	.9324	.....	.....	.0264	.9946	.....	.....	.02904	1.0878	.....	.....	.....	.....	.....	.....	.02244	.8392
Bayonne, N. J.	.....	.....	.02640	.9946	.....	.....	.0264	.9946	.....	.....	.03036	1.15	.....	.....	.....	.....	.....	.....	.02112	.777
Baltimore, Md.	.....	.....	.02376	.9979	.....	.....	.02574	.9635	.....	.....	.02772	1.0256	.....	.....	.....	.....	.....	.....	.02508	.9324
Casper, Wyo.	.03432	1.3054	.....	.....	.03036	1.2432	.....	.....	.04686	2.0202	.....	.....	.03432	1.4297	.03036	1.2432	.02442	.9635	.....	.....
East Braintree, Mass.	.....	.....	.02574	1.0811	.....	.....	.02772	1.0567	.....	.....	.0297	1.2474	.....	.....	.....	.....	.....	.....	.01914	.7148

Refining centers—	Atlanta, Ga. 1	Atlanta, Ga. 2	Birm'h'm, Ala. 1	Birm'h'm, Ala. 2	Louisville, Ky. 1	Louisville, Ky. 2	Me'phis, Tenn. 1	Me'phis, Tenn. 2	Columbia, S. C. 1	Columbia, S. C. 2	Winston-Salem, N. C. 1	Winston-Salem, N. C. 2	Boise, Idaho 1	Boise, Idaho 2	Casper, Wyo. 1	Casper, Wyo. 2	Denver, Colo. 1	Denver, Colo. 2	Gt. Falls, Mont. 1	Gt. Falls, Mont. 2
Group 3 (Tulsa)	.03894	1.4608	.0363	1.3675	.02904	1.1033	.02178	.8236	.04422	1.6628	.04554	1.7094	.0825	3.885	.06633	2.1235	.03267	1.3520	.0825	3.885
North Texas (Fort Worth)	.03894	1.4608	.0363	1.3675	.03069	1.15	.02244	.8392	.04422	1.6628	.04554	1.7094	.08745	4.1181	.05874	2.7661	.03267	1.3520	.08745	4.1181
East Texas (Longview)	.03564	1.3364	.03234	1.2121	.03069	1.15	.02145	.8081	.04191	1.5851	.04356	1.6472	.08745	4.1181	.05874	2.7661	.03597	1.5074	.08745	4.1181
Texas Panhandle (Amarillo)	.04059	1.5229	.03795	1.4297	.03069	1.15	.02343	.8858	0.4587	1.7249	.04719	1.7716	.08745	4.1181	.05874	2.7661	.03102	1.2743	.08745	4.1181
North Louisiana (Shreveport)	.03234	1.2121	.02838	1.0723	.02904	1.0878	.0198	.7459	.03960	1.4918	.04158	1.5695	.08745	4.1181	.05874	2.7661	.03597	1.5074	.08745	4.1191
Arkansas (Eldorado)	.03234	1.2121	.02838	1.0723	.02904	1.0878	.0198	.7459	.03960	1.4918	.04158	1.5695	.08745	4.1181	.....	.....	.03597	1.5074	.08745	4.1181
Texas Gulf (Houston)	.03762	1.4141	.03366	1.2743	.03069	1.15	.02244	.8392	0.4356	1.6472	.04554	1.7094	.08745	4.1181	.05874	2.7661	.03597	1.5074	.08745	4.1181
Louisiana Gulf (New Orleans)	.02838	1.0723	.02442	.9167	.02904	1.0878	.0198	.7459	.03564	1.3364	.03894	1.4608	.....	.....	.....	.....	.....	.....	.....	.....
Kansas City, Mo.	.03894	1.4608	.0363	1.3675	.02574	.9635	.02178	.8236	.04422	1.6628	.04554	1.7094	.0825	3.885	.0495	2.3310	.03267	1.3520	.0825	3.885
Wood River, Ill.	.03366	1.2743	.03036	1.15	.01584	.6838	.0264	.9946	.04026	1.5229	.04026	1.5229	.....	.....	.....	.....	.....	.....	.....	.....
Whiting, Ind.	.03696	1.3986	.03498	1.3209	.0165	.7148	.03102	1.1655	.04026	1.5229	.03960	1.4918	.....	.....	.....	.....	.....	.....	.....	.....
Louisville, Ky.	.02904	1.0878	.02772	1.0411	.....	.....	.02772	1.0411	.03168	1.1966	.03234	1.2121	.....	.....	.....	.....	.....	.....	.....	.....
Casper, Wyo.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.06336	2.4242	.....	.....	.02442	.9635	.0328	1.4608
Savannah, Ga.	.....	.....	.....	.....	.....	.....	.....	.....	.01848	.6993	.0264	1.0101	.....	.....	.....	.....	.....	.....	.....	.....

1—Rates per gallon on refined oils (gasoline, naphtha and kerosene). 2—Rates per barrel on heavy oils (fuel oil, gas oil and crude oil).

Economics of Repressuring Stripper Wells of Particular Interest to Small Concerns

By JAMES O. LEWIS
Dunn & Lewis*

As you are aware, but a part of the oil is extracted from the sands by use of the natural forces accompanying the oil. The amount left in the sand varies with local conditions. In general, it is more with heavy oils, shallow wells, fine grained or low porosity sands, and with wide well spacings. In Many of our shallow fields recovery appears to be less than 10 per cent, but in some other fields such as Archer County, Mexia and Refugio, Texas, the percentage recovery approaches and perhaps exceeds 50 per cent. In the past, recoveries have mostly run very low and I believe that the average recovery from oil sands—not limestones—has been less than 20 per cent. The fields that have been developed in recent years are undoubtedly giving higher recoveries. With greater depths there is more gas power, and the temperature makes the oil more fluid. Likewise better methods of production are having a favorable influence. Limestones appear to give higher recoveries than sands and sandstones.

If, as I confidently believe, average recovery in the older and shallow fields of northwestern Oklahoma and eastern Kansas has approximated 15 per cent, there still remains a huge store of oil awaiting recovery from the old stripper wells—perhaps as much as they have produced previously.

The recovery of this oil is primarily an economic problem. If prices warranted, the oil sands could be mined, the oil sand brought to the surface, and all the oil boiled out in hot soda ash solution as has been done in Germany for many years. But under the conditions that exist now and that are likely to exist for an indefinite period, the first consideration is for methods that are profitable at moderate prices, leaving efficiency of extraction to the hoped for future high prices.

Three Methods Used

As you know, the three methods that have so far been used for getting this remaining oil are repressuring with air or gas, flooding with clear water or chemically laden water, and mining. Aside from reminding you of these three methods, I will not go into them further than to point out that the two latter involve much higher first cost than repressuring and consequently require higher recoveries before being economically justified. Because of this high first cost, talk of mining has been dropped for the time being. Flooding, as you know, is going on actively at Bradford, Pennsylvania, but nowhere else on an extensive scale. It is, however, being tested in the Nowata district with some encouragement, but it is too early to know whether the increase will continue long enough to pay profits over drilling costs.

Repressuring with air and gas has been going on actively in the Nowata district since 1925. Vacuum has now almost disappeared from the field. Increases in many cases have been satisfactory and what has been still more encouraging, many operators have found it a means of decreasing production expense.

Some years ago my firm decided that repressuring should be directed primarily as a means of reducing unit expenses, thus making increases in production a means to that end, rather than an end in itself. I am giving the results of our experience, supplemented by the results from another company, to illustrate what can be accomplished under repressuring. These are the only cases for which I have full facts.

*Before Mid-Continent section, A.I.M.E., Tulsa.

The first property is the Delaware Consolidated Oil Co., which controls nearly 80 per cent of the Delaware Extension Pool in Nowata County. The company was formed by consolidating the properties of several major companies. Repressuring started in 1926 with 350 pumping wells averaging 1,000 feet deep and with a daily yield of 190 bbls. net. The sand is Bartlesville and averages about 40 feet thick. The per acre recovery had been about 1,000 bbls. and from the incomplete records available, total net production had been between 2,000,000 and 2,500,000 bbls. Only two wells have been drilled since we have managed the property so we do not know the true sand conditions, but if it is assumed that only half the reported thickness is pay sand with 17½ per cent porosity (the average porosity in this part of Oklahoma), the sand would have a capacity of more than 20 times the actual recovery at the time repressuring started.

Since repressuring started, 800,000 net bbls. have been recovered. The highest production was in 1929, and in the past two years the properties have not been produced to capacity. It is now producing at a yearly rate of 175,000 bbls. net, and if it were assumed that decline would now start in and follow the curve established before repressuring started, the production down to a quarter of a barrel a well a day would total 1,450,000 bbls. Together with the 800,000 bbls. net recovered so far under repressuring would make a recovery of 2,250,000 bbls. net, or equal to the recovery prior to repressuring. We know that the peak of production will not be passed this year, and it is also known from experience on older repressured properties that after decline does start, it will be at a slower rate under repressuring than under vacuum or natural production; therefore, an appreciably greater recovery than the above can be expected. It is safe to say that we will get more oil from repressuring than the properties had produced before.

Second Property

Comparable results are indicated for another group of properties in the Nowata district under different management. The properties are shallower, had thicker sands, and higher per acre yields, and in general natural conditions were more favorable. The repressuring program is not so far advanced but present indications are that they are likely to nearly equal natural recovery by repressuring.

In Ohio, where repressuring was started as early as 1911, several properties have or will duplicate prior recovery. Unfortunately, there are few properties for which past records could be obtained, so comparisons are limited to a small proportion of those repressured. I believe it is a safe generalization that for shallow properties suitable for repressuring, the recovery for the average property can be doubled under competent operations under present knowledge and prices. Undoubedly there is room for much improvement, and when prices warrant higher recoveries can be expected.

Average Expenses

I have stated that my firm has in recent years been more interested in expenses than in daily rate of production. For this reason we have deferred many of the niceties of engineering for the future. We saw no reason to rush production under these distressed times and overall expense was made the first consideration.

In 1926 the average expense for the companies from whom the properties were taken over was $1.10 per net barrel, of which 84 cents was lifting expense. Counting full day equivalent for part time men, 40 were taken over with the properties. After building the pressure plant, laying pressure and gathering lines and fixing pressure wells, there followed a long period of rehabilitation of equipment that was only completed last summer. Chief among the repair problems was recasing the wells, which were breaking through at the rate of two to three a week. Of the 359 wells now active, 348 have been recased or made into pressure wells. The wells and the property are now in shape that it will last for many years with only monor maintenance except for surface lines.

During the rehabilitation period men and expenses were cut, but it was not until this was finished that the full benefits were realized. The 19 pumpers taken over have been reduced to 5, the total of 40 men to 12, the total expense of $1.10 to an average of 19½ cents for the last three months of 1931, the lifting expense from 84 cents to 14 cents. The expense includes overhead and all current expense except federal income taxes, depreciation and depletion.

Before leaving this statement of expenses, I want to impress the fact that present expenses are not temporary reductions but can be held for many years.

What others may have done in reducing expenses, I have no detailed information except for one which is confidential. I give these figures in order to illustrate concretely my point and likewise in hopes it will elicit information for others. I know that other concerns, particularly small independents, have reduced expenses, though in many cases by cutting wages to a levl that cannot be held and by deferring repairs and improvements, but making allowances for these factors, there is no doubt that unit expenses can be materially lowered under repressuring.

The manner in which expenses are reduced may interest you. Of course, it is impossible when a number of factors are simultaneously involved to apportion exactly the effect of each one of them, but I believe the following analysis is near enough to be of value.

	Expenses first three months 1926	$1.10 per net bbl.	
(1)	Reduction in wages and costs of materials @ 20%	.22 per net bbl.	
(2)	Reduction in gross production tax by oil price decline	.02½	.24½
	Expense after above reductions	.85½	
(3)	Direct economies from consolidation @ 20%	.17	
(4)	Cutting pumping time to 2 days per week	.08	
(5)	Replacing gas engine powers by steam engine powers	.05	
(6)	Renovating wells and reducing pulling from 3 to ⅓ crews	.05	
(7)	Automatic devices at compressor plant	.03	
(8)	Miscellaneous economies	.02½	
(9)	Increasing production by 2¼ times	.25½	.66
	Total saving per net bbl.		.90½

Operating Conditions

After allowing for economies that could have been effected whether or not repressuring had been in use, it will be noted that much of the savings could have been effected only on a repressured property. Not only have the unit expenses been reduced by increased daily production, but the total of expense has been cut from $6,500 monthly to one-half that amount, and, as stated before, the limit of economy has not been reached.

Some of these economies are worth mentioning. We have a central pressure plant with seven 225-horsepower Watts-Miller compressors fitted with automatic shutdowns, and automatic water control operated by air-lift. Only one man operates it. Because of the pressure in the sand, we need to pump our wells but twice a week, thus cutting down pumpers. The method of recasing the wells cuts down pulling to the extent that one pulling machine working half time keeps up with the 330 pumping wells. Instead of gas engines in the powers, we use old drilling engines run by air pressure, which from the standpoint of mechanical efficiency may be terrible, but from the overall standpoint of first cost, low maintenance, ease of starting and ease on rod lines, etc., have made a good showing.

The total costs of improving the Delaware property has been comparatively high, partly because new and first-class machinery was used, but mostly on account of the recasing of so many wells. The cost to date in all improvements is $670 per active well. On the other properties mentioned, the cost is considerably less. Most of the pressure plants are converted vacuum plants, few wells have had to be fixed, the wells are shallow and no so much has been done in reconditioning surface equipment.

Though common opinion is that the stripper wells yield high cost production, the total recovery cost will compare favorably with new production. When all charges are considered for new wells, the cost per barrel is surprisingly large. The costs of geological, land and leasing departments, lease costs and rentals, development and all the other capital items must eventually be returned from earnings, and their total more than overbalances the lower operating expense. Various investigators have reported the total cost of finding and producing a barrel of oil to average over $1 a barrel. The stripper wells, under repressuring, can produce oil much more cheaply and therefore they have a real economic future and will be a source of important revenue for a surprisingly long time to come.

But there is doubt in my mind whether the future of the stripper wells can be realized through large company organizations. It is notable that during these troublesome times it has been the large companies that have let go of properties and the small companies and individuals specializing in old production that have been taking them up.

There has been a reversal of the usual order of the big fellow swallowing the small one and it is significant that this trend is manifest in some other kinds of business. It would appear that for some types of business personal attention, close economy, freedom from red tape and specialization of one type of business in one area may be more efficient than large corporation management. The organization, the viewpoint, the procedures, the capital adapted to the development and handling of large production does not work well when applied to the strippers. Nor is the large organization flexible enough to meet radical changes in conditions.

Our experience has also converted us thoroughly that unit operation is highly desirable for repressuring. It can be made both more efficient and more economical no matter how cordial co-operation along property lines may be.

New Associated Petroleum Industries Committee Urged to Combat Unjust Tax Increases

NEW YORK, July 2.—W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, has proposed thoughtful and serious consideration by the institute's board of directors of a resolution dealing with taxation and, if concurred in by the directors, its adoption and immediate execution of at least its substance. Mr. Boyd believes conditions confronting the industry are now serious enough to warrant the step proposed without delay.

The proposed resolution follows:

Resolved, by the board of directors, that the American Petroleum Institute sponsor the immediate creation of and invite the general support by the petroleum industry for a special committee organized and having responsibilities, to-wit:

1. A national committee, composed of nine executives or attorneys actively engaged in the petroleum industry, to be known as the Associated Petroleum Industries Committee. The nine members shall be elected annually by the board of directors of the American Petroleum Institute. In addition, the president and the executive vice president of the institute shall be ex-officio members of the committee. The committee shall select a chairman and secretary who shall be compensated and devote all their time to the prosecution of the committee's work.

Purpose of Committee

2. It shall be the duty of the committee to provide and direct adequate organization and personnel:

(a) To oppose vigorously any increase in federal, state or local tax on gasoline, lubricating oil or any other refined petroleum product wherever proposed.

(b) To assemble facts and arguments and arrange for their dissemination, and organize and conduct vigorous campaigns looking toward either the repeal of existing laws levying gasoline tax or reductions of the present gasoline tax rates.

(c) To present wherever necessary argument against the levying of any tax on gasoline, lubricating oil or other refined petroleum products by counties and municipalities or other local subdivisions of state governments.

(d) To prepare, disseminate and present argument against exemptions from payment of the gasoline or lubricating oil tax where levied and oppose vigorously the diversion of gasoline tax revenue from road construction and maintenance programs.

(e) To protest and oppose all unreasonable license fees, occupational taxes, the so-called chain store tax and all other forms of unfair and discriminating taxes that may now be imposed or are hereafter sought to be imposed upon the refining and marketing branch of the petroleum industry or any of its products.

(f) To pursue persistently every lawful means of combating the gasoline or other form of petroleum tax evader and seek ways and means to prevent the substitution and misbranding of petroleum products.

(g) To perfect machinery for protecting the interest of the industry with respect to local ordinances or state legislation or regulations affecting the conduct of the business of refining and marketing refined petroleum products. Such problems shall include such subjects as weights and measures, fire and safety storage rules, the regulation of the industry's automotive truck delivery equipment, specifications for gasoline, kerosene and motor oils, branding of products, etc.

(h) To function as the committee to which shall be referred by the institute, other oil associations and the units of the industry for action matters pertinent to all forms of taxation and regulation and the problems incident to and arising therefrom so far as they relate to the refining and marketing branches of the petroleum industry.

(i) To establish contacts and cooperative relationships with all other organizations, national, regional or local, having a kindred interest in such of the problems as may come within the scope of the committee's activities.

3. While the said committee shall function under the general sponsorship and auspices of the American Petroleum Institute, it shall be financed separately from and independent of the regular general budget and as a special activity by contributions made for the specific purpose of conducting the work enumerated. Upon election, and before entering into any commitments for expenditures, the committee shall solicit those engaged in the petroleum industry to underwrite a fund of such amount as the committee may determine is necessary to adequately conduct its work. The underwriting should be on the basis of a period of not less than three years. The committee shall be limited in the amount of its expenditures only by its ability to raise currently the necessary funds to meet a balanced budget. No liability for the Institute to pay out of its general budget any of the committee expense shall be authorized. The Institute shall, however, provide the facilities for receiving funds donated and disbursing them upon the proper order of the committee.

4. When financed, the committee shall forthwith proceed to select its paid chairman and secretary and organize the necessary staff personnel of attorneys, publicity men and other necessary assistants and thereafter, under the active general direction of its chairman, prosecute vigorously the work assigned to it.

Co-ordinate Nationally

5. The committee shall undertake and use every effort to co-ordinate nationally and bring together in each state all of the forces now engaged or which should be engaged in actively protesting and defending the refining and marketing branches of the industry from unreasonable taxation and regulation. To this end, the committee is authorized to create, as sections or subdivisions, state or regional Associated Petroleum Industries committees and to invite the co-operation and active participation and support financially and otherwise, of all the refining and/or marketing interests doing business within the particular state or region. In the event of the creation of such state or regional organization, the national chairman shall employ and assign a full time paid secretary and such other temporary or permanently employed legal counsel, publicity assistants or other help as may, in the judgment of the national committee, be required. The committee shall be authorized to work out some satisfactory plan for budgeting and financing expenditures for each state or regional committee set-up under its sponsorship and direction, and in order to effect economy and increase efficiency such program should contemplate the transfer of any or all these paid state or regional employes from state to state or region to region as the exigencies might require, it being understood that each state or regional committee employe is a part of the national committee staff and operating under the direct employment and direction of the national committee.

Mr. Boyd added the following statement in support of the resolution:

The refining and marketing branches of the petroleum industry are constantly harassed with all forms of taxation and regulation. Much of it is unreasonable and discriminatory. Most of it is state or local. Unlike those in the producing branch, most of the problems of taxation and regulation of refining and marketing are common and noncontroversial.

These problems that are common to all refiners and all marketers cover a wide range and variety of subjects, such as the high gasoline tax with the variety of evils which grow out of it such as tax evasion and substitution; the growing tendency to divert the tax revenues for unemployment or charitable or for general purposes; the license and occupational taxes; the increasing tendency to levy county and municipal gasoline and lub taxes; the innumerable forms of legislation and regulation, both state and municipal that are so well known to every sales department affecting weights and measures, fire, safety and storage rules, tank truck regulations, state motor fuel and kerosene specifications and what not.

With respect to these problems the industry generally is exercised and here and there spasmodically and at great expense trying to meet the issues as they arise. Without criticism of any of this valuable work, it is obvious that there is no national policy, that our efforts are unco-ordinated nationally or even locally and, due to this factor, frequently oil men or oil agencies work at cross purposes, thus making impossible effective work, and that the hastily constructed emergency machinery plus inevitable duplication results in an enormously increased aggregate time consuming and money cost to the industry.

Some councilman proposes a municipal gasoline tax or a high license fee bill or some form of fire or safety regulation, or some specification, regulation or something else and the representatives of companies, without opportunity for preparation or at great cost, rush in and expend time, energy and money presenting the best emergency defense that can be devised. Sometimes it is done without conference, result, nobody is satisfied, usually everybody is hurt.

A proposal is made to increase the gasoline tax in some state and the principal companies hurriedly and excitedly put together some machinery, employ some one and the cost is inevitably several times what it would be if the machinery were all set and ready to function on a moment's notice. I am told that the committee in New York, in a few weeks, expended $27,750; in Massachusetts, in a few days, $5,000, and in New Jersey, $48,000. Multiplying any one of these figures or the average by 48 and it will readily be seen how rapidly the emergency defense fund will grow only to oppose gasoline tax increases.

To Spend Million and Half

Mr. Hadlick has estimated for me that the industry has contributed here and there in 1932 to special funds to combat gaseoline tax evasion over $500,000. He also tells me that almost $200,000 per annum is being contributed to finance the state code committees.

It woud probably be safe to estimate that under present methods the industry will spend in the aggregate $1,500,000 during 1933 in an effort to oppose the various forms of taxation and regulation to say nothing of the loss of time and actual expense of executives, attorneys and company employes with the consequent loss of application to the regular business which all these gentlemen have to conduct.

It does seem that in the interest of uniformity, efficiency and economy in cash expenditures we should now attempt to set up a nation-wide program that will co-ordinate nationally and locally all our refining and marketing defensive interests.

Most of the state legislatures will be in session the coming winter. If we are to prevent increases and diversion of gasoline taxes or intelligently initiate any movements to reduce any of these taxes the program and machinery should be thoroughly organized and vigorously at work before winter comes. Every present state tax rate should be studied and where conditions warrant, a campaign be developed and conducted to reduce the rate. Even if the effort should fail, the attendant publicity will have a tremendous educational effect and the effort may be the back-fire responsible for preventing an increase in the tax rate.

Under the plan proposed by the resolution cited, one small working committee would be charged with the responsibility of organizing and conducting a defensive program of intense activity on a nation-wide scale. The petroleum interests would save enormous sums of money if they would contribute only to a co-ordinated national and state program worked out by such a program. In addition, under such a set-up, the companies would save the time, energy and expense involved in sending officials and employes to all points of the compass, except in those cases of emergency when massed forces were called by the committee.

There should, in my judgment, be created at once, national and state machinery, adequately financed, adequately provided with a personnel, management, legal, publicity and otherwise, ably qualified to cope with the job of protecting the industry's interest by whatever legitimate methods the committee could devise.

I believe such action would result in lifting a load from the shoulders of every oil company executive, relieve his staff and employes of an enormous amount of diverting work, result in an actual saving in the aggregate amount of money each company now expends and save the oil industry in general literally millions of dollars in taxes paid and remove all manner of useless nuisance regulations.

New Set-Up

Once the state associated petroleum industries committees were organized, all of the tax evasion work now being conducted could be turned over to the new set-up, and the paid secretaries could, in each instance, function without further compensation, as the secretaries of the state code committees, thus relieving the companies also of some $200,000 further burden of expense.

I do not, however, think that any director or any oil company executive should support the resolution proposed until he understands it and unless he is willing for his company to support the program aggressively, including the necessary substantial financial contribution. It would be worse than useless to attempt a co-ordinated national program and have it fail through lack of moral and financial support. A rough estimate of the fund necessary would be anywhere from $500,000 to $750,000 per annum, which would probably halve the aggregate of expenditures now made by the principal marketing and refining interests, to say nothing of the saving resulting from the release of company employes from the active conduct of the character of work that would be turned over to such a set-up.

It would be embarrassing to everyone to go into the open legislative session unorganized and unprepared and find that emergency agencies and machinery, hastily improvised, proved not only excessively costly but ineffective. I am arguing for and urging preparedness.

Many Advantages Shown for Unit Operation Over the Old System of Law of Capture

By EARL OLIVER

The article and chart of S. A. Guiberson, Jr., printed in The Oil and Gas Journal of June 23 lend themselves so admirably to illustrate the wastefulness and injustices of the competitive-drainage capture method as contrasted with operation under the acreage-content standard sponsored by The Oil and Gas Journal that we are referring to it again and reproducing the charts for the sole purpose of making comparison between the two methods.

Mr. Guiberson is to be congratulated on his thought-provoking article. His statement that he is "100 per cent in favor of a law that will provide for ratable taking of oil and gas from a pool based on some unit of acreage" is to be commended, for that position is much in advance of the old method that bases ratable taking on individual wells. The individual well system promotes an indefensible amount of drilling and increases inequities in extraction. But while he thus recognizes the correctness of the principle of an acreage content standard, his proposed method of applying it, we believe, does not reach to the heart of the difficulty.

Lends Itself to Analysis

We take Mr. Guiberson's article as a basis for discussion because of its merits. It is so well prepared that it lends itself to analysis, which, unfortunately, much of the usual opposition to progress does not do.

Assuming and accepting for the purpose of this comparison all the hypotheses assumed by Mr. Guiberson, the comparative results from the two methods, in so far as returns to the individual owners are concerned, according to our interpretation, would be approximately as indicated in a taubulation later included. It is, of course, recognized that certain hypotheses assumed by Mr. Guiberson would not work fully in actual practice, but nevertheless they serve to develop reliable comparisons.

We suspect these hypotheses assumed for the East Texas Field would be more nearly applicable to the Permian lime fields of West Texas where water movement is more rapid. Also subsequent history appears to indicate water encroachment in East Texas is not sufficiently rapid to propel any considerable part of the assumed 500,000 bbls. daily production and maintain original reservoir pressure; but nevertheless the hypotheses serve to illustrate the relative merits of the two methods and will be used for that purpose. Fields exist where the assumptions would apply.

According to Mr. Guiberson's chart No. 1, while the East Texas Pool was in its undisturbed condition (before any oil was extracted from Zone A) there was contained in the 500 20-acre tracts of area No. 1, 90,000,000 bbls. of recoverable oil; in area No. 2, 150,000,000 bbls.; in areas 3, 4, 5, 6, 7, 8 and 9, 180,000,000 bbls.; and approximately 120,000,000 bbls. in area No. 10.

Assuming also Mr. Guiberson's hypothesis that "there is a constant water pressure of 1,600 pounds under the western edge of the oil content and as a barrel of oil is taken out of the oil sand in any part of the field the 1,600-pound water pressure forces another barrel of oil to take its place," it is seen that at the end of the second year (chart No. 2), area No. 1 is fully depleted. The recoverable oil has either been extracted through wells drilled on the 500 20-acre tracts in that area or migrated up the slope to replace oil removed from wells in other areas. In like manner at the end of each succeeding year one additional area of 500 20-acre units is depleted.

Relative Recoveries

Accepting Mr. Guiberson's hypothesis as completely workable, the following tabulation indicates our understanding of the relative recoveries by each owner:

It will be noted those owners down the slope in areas 1, 2, 3 and 4 recover only 30 to 51 per cent of the recoverable oil from their lands while those farther up the slope recover percentages up to 307 per cent of the original recoverable oil content of their lands. Obviously this large recovery upslope is due to migration from lands located farther down.

It will also be noted this disproportionate recovery is based on the assumption (by us in this calculation) that every 20-acre unit starts to produce at the same time, which, of course, is impossible and undesirable even it it were possible; for it would create a congestion and throw a sudden new supply on the market that the market is entirely unprepared to absorb. The point we desire to make is

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Chart and hypotheses developed by S. A. Guiberson, Jr., as taken from his article reproduced in The Oil and Gas Journal of June 23. For statement of his position on the issues involved see that article.

By S. A. GUIBERSON, Jr.

I have attemped to illustrate a typical cross section of the East Texas oil field, using approximate figures for field area, thickness and dip of sand and oil content and average yearly withdrawal. Any inaccuracy in figures shown will not affect the physical condition and results I am trying to portray.

Field area, 100,000 acres; dimensions, 5 miles by 31 miles; oil recoverable, 1,800,000,000 bbls.; allowable production, 500,000 bbls. per day; unit of operation 20 acres per well; number of wells producing, one well on each 20 acres, 5,000; production allowable per well, 100 bbls. per day; production per year, 182,500,000 bbls.; life of field, 10 years; hydrostatic pressure, 1,600 pounds constant; dip of oil sand, 30 feet to 1 mile; thickness of sand, 90 feet; width of field underlaid with water, 1½ miles along the western edge.

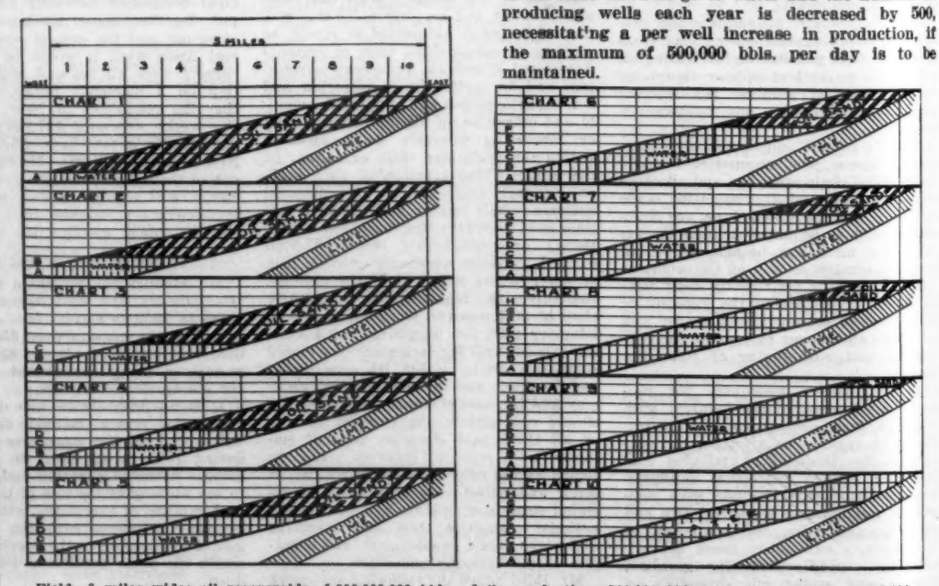
Assuming one well has been drilled on each 20 acres and that no well be permitted to produce more than 100 bbls. per day, we would have an equal and ratable withdrawal over the entire field and a condition in which no operator could be accused of stealing oil from his neighbor.

The graphic charts show cross sections of field depicting the oil sand with its dip of 30 feet to the mile and an average thickness of 90 feet. The chart No. 1 shows the sand divided into 10 equal zones, each having a recoverable oil content of 180,000,000 bbls. of oil based on the total recoverable oil from the field of 1,800,000,000 bbls. These zones are lettered "A" to "J." The chart is divided into 10 equal areas drawn perpendicularly and numbered 1 to 10. The oil sand in chart No. 1 represents the oil content at the beginning of the first year's operation.

Charts Nos. 2 to 10 inclusive represent the oil content at the end of each successive year and show by the perpendicular and zone lines the amount of area in which water has displaced the oil.

In studying these charts, it is necessary to keep in mind the fact that there is a constant water pressure drive of 1,600 pounds under the western edge of the oil content and the fact that as a barrel of oil is taken out of the oil sand in any part of the field, the 1,600-pound water pressure forces another barrel of oil to take its place. From these charts, it will readily be seen that one-tenth of the area of the field will be completely taken by water each year. It will also be easy to see that Areas 1, 2 and 3 are only partially filled with oil in the beginning, but that Areas 4 to 9 are completely filled and are equal as far as oil content of sands underlying the surface areas are concerned. From the charts Nos. 2 to 10, it will also be seen that each year one of these areas is completely taken by water and that area No. 4, which has an oil content equal to Areas 5 to 9 will be completely drained of oil at the end of the fourth year. Likewise 5, 6, 7, 8 and 9 will successfully lose their oil content.

As each area goes to water, one-tenth of the wells in the field likewise go to water and the number of producing wells each year is decreased by 500, necessitating a per well increase in production, if the maximum of 500,000 bbls. per day is to be maintained.



Field—5 miles wide; oil recoverable—1,800,000,000 bbls.; daily production—500,000 bbls.; yearly production—182,500,000 bbls.; life of field—10 years; dip of oil sand—30 feet to mile; thickness of sand—90 feet; area underlain with water—1½ miles; hydrostatic pressure—1,600 pounds

The above graphic charts depict the approximate condition in the East Texas Field and are based on a total content of 1,800,000,000 bbls. recoverable oil and an increase or decrease from that amount will extend or curtail the life of the field (not to scale).

that the disproportionate recovery between owners otherwise entitled to the same amount is, in actual practice under the capture method, much greater that we have indicated on the foregoing tabulation, for those who delay development lose quickly, in whole or in part, their opportunity to recover their portion of the oil. The old adage that haste makes waste is abundantly exemplified in the oil industry. It is this need of haste in extraction that is at the bottom of the industry's difficulties. It promotes overproduction and great waste. The influence that promotes these must be removed if the industry is to recover, and we see no way to remove that influence except to devise some means whereby the relative quantity of oil to which each owner is entitled can be determined while the product is yet in the common reservoir.

Waste and Inequities

It is furthermore to be noted no allowance was made in the above tabulation for the loss of oil in the ground through water by-passing or coning by reason of hasty development and withdrawal as contrasted with a slower, orderly water drive. Also that the waste and inequities of extraction are much less in a pool of the character here described that derives its propulsive force from hydrostatic head rather than from entrapped natural gas. However, even in East Texas the waste and inequities are so great as to be indefensible. Yet they would have been much worse had this great pool been of the gas propulsive type.

Mr. Guiberson in his letter of transmittal states: "I am a firm believer in the right of the individual to profit from his knowledge, experience, initiative, and risk, and can never agree that his reward should be limited to any fixed rule or method whereby the timid, halt and blind can reap equal benefits." We all unite with Mr. Guiberson in admiration for enterprise and initiative in the individual. But rewards should be based on those qualities, not on some quirk of the law that is out of harmony with experience of the ages and that was accidentally initiated by a jurist because of his ignorance of the subject matter on which he was adjudicating and the vast consequences that would flow from his seemingly unimportant decision.

Mr. Guiberson's philosophy on rewards needs to be applied with discretion. Civilizations are built on equality of opportunity and protection of the weak against the strong. The oil industry is suffering chiefly because it has adopted the methods of the jungle long after they were discarded in other industries. The law of the survival of the fittest will ever operate, but it is the purpose of government and civilizations to lessen and temper its rigors and particularly should this be true when government licenses great group of men and capital and permits them to operate as single artificial entities in competition with individual human beings.

No individual can compete with the vast aggregations of men and capital known as corporations unless government does protect "the timid, halt and blind." We have passed into a period of economic development where these vast artificial entities seem necessary, but thoughtful men at the head of them recognize the need of regulation. The law of the jungle was not so bad so long as men competed as single individuals, but when the law helps to set up artificial entities that give to one man the strength of a thousand men, then it must also protect the individual man from the superman it creates.

As stated, this is recognized by the more thoughtful of those who function at the head of these great corporations and yet retain a sense of the rights of the individual. Some men attain places of great power through these artificial entities and still contend for the same freedom of action to fight their fellow man that they had as normal human beings. They accept the advantages government gives them over their fellow men but protest against accepting its restrictions to prevent abuse of the endowed strength. Unless regulation is substituted for the law of the jungle a contest in which these vast artificial entities are engaged proves fatal to the independent operator or small company.

Fight Against Regulation

Strangely enough, the fight against regulation has been waged in the name of, and by, the so-called independent operator when sound regulation is the only means by which he has a chance to survive in this contest in which financial giants are engaged.

COMPARATIVE RESULTS TO INDIVIDUAL OWNER UNDER EACH METHOD, ASSUMING HYPOTHESES SUGGESTED BY MR. GUIBERSON

	Original content of recoverable oil distributed among owners according to acreage content		Maximum possible recovery by respective owners under capture theory provided utmost diligence is observed.		
Area No.	All 500 tracts (barrels)	Each 20-acre tract (average) (barrels)	All 500 tracts (barrels)	Each 20-acre tract (barrels)	Per cent of recoverable content
1	90,000,000	180,000	27,375,000	54,750	30.4
2	150,000,000	300,000	46,638,500	93,277	31.0
3	180,000,000	360,000	68,183,500	136,367	37.8
4	180,000,000	360,000	92,625,000	185,250	51.4
5	180,000,000	360,000	120,660,000	241,320	67.0
6	180,000,000	360,000	151,077,000	302,154	83.9
7	180,000,000	360,000	187,577,000	375,154	104.2
8	180,000,000	360,000	233,202,000	466,404	129.5
9	180,000,000	360,000	294,034,500	588,069	163.3
10	120,000,000	240,000	369,034,500	738,069	307.5

For his protection there must be rules of economic warfare. It is not strange that men with vision at the head of these vast economic structures advocate regulation. They are able to visualize the chaos and slaughter that will ensue when an economic war begins. We have learned from experiences in the recent great war that even the victors do not profit when a slaughter begins. "Where there is no vision the people perish, but he that keepeth the law happy is he."

The right that landowners have enjoyed since the beginning of the industry and which is so well and vigorously defended by Mr. Guiberson is in fact only the right of unregulated capture. Now that government is compelled, as is the function of government, to substitute for nonregulation some type of regulation (which Mr. Guiberson admits), then government should adopt a corrective type of regulation instead of merely perpetuating, in slightly modified form, the evils of the old system that were originally imposed through ignorance. The basis on which the landowner was originally permitted to extract oil from his land was on the theory that he was entitled to the content of his land. This theory of ownership in real estate is older by centuries than the unregulated capture theory pertaining to oil that grew out of it. Courts initiated the capture theory merely as one means of determining the relative content of lands. Now that better methods are known for determining that content, no merit exists in maintaining this illogical, unfair, wasteful and destructive method that has no counterpart in the laws of private property.

If the standard is adopted that is set out in the program sponsored by The Oil and Gas Journal, then under such a set of facts as those described by Mr. Guiberson, with hydrostatic head as the propulsive force and with no free gas area on top of the structure, the only place where wells need be drilled through which oil is to be extracted, would be in area No. 10. This may be assumed only where high permeability and free water movement are also assumed No wells need be drilled in areas 1, 2, 3, 4, 5, 6, 7, 8 and 9 except those that are required to determine the relative productivity of those areas as a basis for apportioning the oil among owners. Five hundred wells producing in area No. 10 at the rate of 1,000 bbls. per day each would produce all the oil permitted to be taken out of this pool under Mr. Guiberson's hypothesis and would be preferable to 5,000 wells scattered over areas 1 to 10 inclusive with each well reduced to 100 bbls. per day or less, assuming of course, as Mr. Guiberson did, that there is adequate water drive to propel the oil.

Even greater savings would result from application of these principles but an entirely different development program would be applied to the reservoir where natural gas is the propulsive agency and a free gas area exists on top of the structure.

Advantages of Plan

Many advantages would occur under this character of operation as compared with the capture method:

1. Development and operating costs per barrel would be very much less.

2. The frenzied development and overproduction conditions that characterize the discovery of a new pool would be absent.

3. Every owner would be entitled to that proportion of the 500,000 bbls. per day withdrawn from the pool that the recoverable content of his 20 acres bears to the recoverable content of the reservoir.

4. No incentive would exist to force oil on an unwilling market.

5. Oil could be delivered to each owner when and as he needs it instead of being compelled to take it when he does not need it. Properties would be more valuable and more readily salable since the purchaser would know he does not carry the hazard of unreasonable development costs or of losing his oil entirely by migration.

6. Independent operates and royalty owners wishing to turn their property into cash at once would be able to do so under better conditions because they would be in demand by the major companies as permanent reserves.

7. There would be no salt water disposal problems or pollution of streams since the water would remain as a driving force along the western edge and oil would be extracted from the pool only as rapidly and at such points as it could be taken without coning. Consequently water production would remain at a minimum.

8. Stealing oil would be eliminated because the outlets of the pool would be few and the division of the oil from those outlets would be on a mathematically calculated division order subject to easy supervision.

Unit Operation

The described method of course implies unit operation, and as described implies equal productivity in each 20-acre tract. Equal productivity does not exist, but as was shown in The Oil and Gas Journal of October 15, 1931, engineers are now convinced methods are available whereby the relative productivity of different tracts in a pool can be ascertained with reasonable justice to all parties. There would be in such determination no such injustice as is indicated in tabulation No. 1. That tabulation was based on the ideal competitive-drainage proration system. It implies that one well and only one was drilled on every 20 acres. As a matter of fact under the capture method many of the 20-acre tracts would remain undrilled to such a time that most of their oil content would be lost through migration.

As stated, the equalization method described implies unit operation.

Applying the acreage-content standard to a pool where each property is to be operated under separate management would require development of a proration system adjusted to the peculiar conditions of each individual pool. The advantages of unit operation, however, are so obvious, its operation so simple, and the rights of each party are so easily protected under it against abuse that general adoption of unit operation would appear probable if the principles of the acreage-content program sponsored by The Oil and Gas Journal are adopted. The law might well provide that the type of development in any local pool would be subject to majority determination with adequate provision for protecting the minority owner against abuse and for requiring the total production of the pool to be kept down to a market demand schdule prepared by the state regulatory body.

Some Oklahoma City Field Completion Problems Solved by Use of Special Oil as Fluid

By L. G. E. BIGNELL
Petroleum Engineering Editor

In every oil field it has been noted that wells drilled late in the development period encounter many changes in underground conditions, especially if the field had been produced during the development stage. In the older fields it was common practice to permit gas to escape freely to the atmosphere in order to bring oil into the well, or to secure more oil by producing greater quantities of gas. Such practice resulted in lowering rock pressures within the producing zone, and late wells often had to go on the pump almost as soon as completed, while those drilled earlier in the life of the field flowed freely.

While the production methods in the Oklahoma City Field have been more in keeping with conservation of underground energy stored in the reservoirs from which the oil is recovered, still there has been a lowering of pressures in each of the three major producing zones: Arbuckle lime, Lower Simpson and Wilcox sands. This lowering of reservoir pressure in the first two zones named has permitted water to move quite freely through them, and all wells in the Arbuckle lime area produce large quantities of salt water along with the oil and many have had to be plugged in the lower formations and are now being produced only as gas wells from upper sands.

In the Lower Simpson formation water has moved steadily through the various sands making up that section, and nearly all of the wells have shown some evidence of it, the quantity produced varying from a trace to as much as 85 per cent. Plugging back in the Johnson sand has resulted in some control of this water movement at individual wells but with the formation pressure materially reduced below its original pressure the water has moved steadily through the sands in every direction and has made it necessary to handle the wells carefully in order that too large a volume of water is not produced with the oil.

In the Wilcox sand zone there are 10 wells reported as showing water and they are rather widely separated. However, it has been established that formation pressures in the Wilcox sand has been lowered by about 400 pounds or from its original pressure of about 2,400 pounds per square inch to about 2,000 pounds. Some wells have been permitted to produce excess quantities of gas because of the claim that they were "gasoline" wells and others have had high gas-oil ratios so that the rate of depletion and withdrawal of gas from this formation has been higher than desired.

Completing Wells With Fluid

These changing conditions in the Wilcox sand zone of the Oklahoma City Field have created some new and interesting problems for the production men in connection with the completion of their new wells. This is especially true of the Sections 22 and 26 area in Township 11-3w, in the middle portion of the Wilcox sand zone where there is considerable activity at this time.

Under the original method of completing wells in the Arbuckle lime and Lower Simpson zones in this field, it was common practice to load the hole with weighted mud fluid to control the gas encountered in the formations under pressures of about 2,400 pounds. Even with this weighted mud some wells have come in out of control because the mud has become gas cut and consequently has been so reduced in weight that the bottom hole pressure exerted by a column of it was less than the rock pressure encountered.

In completing wells in the Wilcox sand area it has also been the practice to use weighted mud as long as the rock pressures were near 2,400 pounds, but as they were reduced some wells have been completed with only salt water in the casing at the time of drilling in.

These holes have an average depth of about 6,500 feet and if filled with salt water having a gravity of 1.02 to 1.03, the bottom hole pressure would be about 2,850 pounds per square inch, or 450 pounds in excess of the original 2,400-pound rock pressure. However, at the time salt water was used in drilling in, the bottom hole pressure was lowered to about 2,200 pounds or less, and the differential between pressure of fluid column and formation pressure was therefore greater than the above figure.

This increase in differential has served the original purpose of controlling the oil and gas from the Wilcox sand as the well was drilled in and preventing blowout, but it has been found in many instances that it has been detrimental in that some of this salt water has penetrated into the sand and has later been produced with the oil.

It has been stated that the quantity of water used while drilling in some wells in the Wilcox sand has been rather excessive as shown by the fact that a slush pit 20 feet wide and 60 feet long and 6 feet deep filled with this water has disappeared and in addition there has been added to the pit during the drilling in period as much water as would run through a 2-inch pipe under considerable head. It has been estimated that from 1,000 to 1,500 bbls. of water has disappeared into the formation as the well was completed.

This has been returned when the well was opened for test and has shown up with the oil in proportions of as high as 4 per cent at first. It has gradually decreased in volume and at the end of one test period only amounted to 0.9 per cent and entirely disappeared from the oil when the well was later put on production.

Drilling in With Oil

If the well is drilled in with mud-laden fluid the specific gravity of this fluid will vary from 1.10 to 1.20 and the bottom-hole pressure exerted by this column is therefore greater than that of salt water. While this greater weight was of advantage in completing wells during the earlier period of development, it was not desired when the formation pressures had been materially reduced because there was a tendency of the water to filter out of the mud fluid into the sand and a cake of mud to form on the face of the hole.

The next step was to try drilling in with crude oil but it was found that using this fluid medium, there was a greater tendency for it to absorb gas from the formation and this would lighten it to such an extent that the well might come in unexpectedly and out of control.

The use of oil in drilling in had many advantages over any other method but the crude oil was not a satisfactory medium for the reasons above stated so the production department of the Phillips Petroleum Co. decided to try to secure a refined oil that would not gas cut or absorb gas, and use this for drilling in their wells.

Knowing all the requirements for such an oil, specifications were sent to the Phillips refinery at Okmulgee,, Okla., and after some experimenting it was found that the refinery could supply an oil of 28 A.P.I. gravity, or .8871 specific gravity, with a flash of 242-250° F. that did not absorb gas and contained no paraffin or tar. The test for gas absorption was made in the refinery laboratory by bubbling gas through the oil for several hours at a time and checking its gravity. No change in gravity was noted, and it was therefore assumed that the oil did not absorb gas.

It was then decided to make a test of this method of drilling in Phillips Petroleum Co.'s No. 1 Gates, in Section 22, and 1,200 bbls. of the oil was ordered from the refinery and delivered to four 210-bbl. tanks near the well location. These four tanks are so connected that oil will flow from one to the other and can be pumped from one end tank to the well and into it as needed.

Ordinary type steam slush pumps are used in drilling in and the well was first loaded with 262 bbls. of this oil. It required 77 minutes to fill the 6,477 feet of 7-inch casing and the 13 feet of open hole at the bottom of it and it was therefore decided that returns could be expected to reach the top of the casing in about that time after drilling in was started.

The hook-up at the well consists of three heavy-duty master gates above the casing, with fittings above these gates for connections to the slush pump that draws oil from the four 210-bbl. tanks in which the special oil is stored. The oil is forced down into the hole through the 3-inch drill stem and returns between drill stem and casing and is delivered into a 4'x16' high-pressure separator laid down on its side near the derrick. This separator is elevated at one end so that cuttings will have some chance to accumulate in it. The oil is picked up from the separator by the second slush pump and delivered into the tank at the opposite end of the battery of four tanks from which the clean oil is taken.

It is intended that cuttings will settle out in these four 210-bbl. tanks and provision has been made to draw them off into a small pit located in front of and parallel to the four tanks so that only clean oil will be returned to the well while drilling in proceeds. In this way about 200 bbls. of oil was pumped into the well every hour while it was being drilled in and the velocity of the upward current between drill pipe and casing in the well was about 8.3 feet per second or sufficient to carry out any material ground up by the bit.

Satisfactory Results

Phillips Petroleum Co.'s No. 1 Gates was the first well in which this special oil was used and the results obtained were all that were expected, and in some details the trial was even better than anticipated. This well has a total depth of 6,490 feet, and 6,477 feet of 7-inch casing has been cemented in it. The top of the sand was found at 6,480 feet, so there was 10 feet of the Wilcox sand exposed in the hole when drilling in started.

With this 28 gravity oil the weight of a fluid column 6,490 feet high would be 2,475 pounds, or about 475 pounds in excess of the 2,000-pound formation pressure now existing in the Wilcox sand. This is enough difference to permit control of the well during drilling in and as the oil did not gas cut the trial was quite satisfactory.

The comparative pressures that might be exerted upon a sand at the bottom of a 6,490-foot hole by the use of clear water, salt water, 12-pound per gallon mud and 28° oil are shown in the following tabulation:

Fluid—	Sp. gr.	Weight per foot of column, lbs.	Pressure exerted at bottom of hole, lbs./sq. in.
Clear water	1.00	.43	2,790
Salt water	1.02	.4386	2,846
12-lb. per gal mud	1.45	.6235	4,046
28 gr. special oil..	0.8871	.3815	2,475

This method of completing wells has many advantages in addition to preventing drilling water from penetrating into the producing formation. The fire hazard common when crude oil is used for this purpose is largely eliminated by the use of this special oil which has a flashpoint of from 242° to 250° F. This means that the oil will not ignite until those temperatures have been reached whereas the ordinary fresh crude oil as it comes from the wells will catch fire at about atmospheric pressure.

Further, if some of this special oil should penetrate into the formation, no harm will be done because it will be later recovered, and should have no appreciable effect upon the crude oil in the well. In testing the special oil in the laboratory it was found that Wilcox sand settled out of it very readily, so it dropped cuttings in the tanks quickly during the drilling-in period.

It was also found that this oil when mixed with an appreciable amount of fresh Wilcox sand oil still did not absorb gas or gas cut which anticipates a condition that would be set up as drilling in took place for the oil in the formation that was liberated into the hole mingled with the special oil but without impairing its efficiency in any way.

Providing Against Floods

The Oklahoma City Field was recently visited by several floods which created high water in the north fork of the Canadian River which runs through the north end of the field. The river was out of its banks for several days and derrick and tank foundations were jeopardized. Operations in the field had to be temporarily suspended and some locations could only be reached by boat.

When the northern part of the field was being drilled in the summer of 1930, field men for the Phillips Petroleum Co. anticipated just such a condition as recently occurred and prepared for it by setting their derricks upon special concrete foundations which were described and shown in detail in an article on page 29 of the July 10, 1930, issue of The Oil and Gas Journal.

Below the surface soil in the river bottom there is a bed of quicksand, and to insure against this surface soil and quicksand washing out from under the derrick and permitting it to settle, the Phillips Petroleum Co. sank eight 12-inch casings to bedrock, which was encountered about 50 feet below the surface.

These casing piles were cleaned of sand and loaded with concrete and four of them formed the supports for the derrick foundation piers, and the other four formed supports for the all concrete cellar. The 20-inch diameter surface pipe was sunk into the bedrock and extended up into the concrete bottom of the cellar. Runway and vent was provided from the bottom of the cellar, which is 16 feet deep, and lead to the surface. Reinforcing iron was used in the concrete throughout and underneath the whole derrick

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there was cast a concrete monolith 26 feet square and 12 inches thick.

In this way the load of the derrick with its equipment was all carried directly upon the 12-inch concrete filled casing piles to bedrock and when high water from the recent flood cut under the foundations and removed as much as 12 feet of sand the derricks did not shift in the least. Because the floodwater did not cut to bedrock, an almost impossible condition, the piling was held in place and supported the derrick load satisfactorily.

River Locations Stand

Phillips Petroleum Co.'s No. 1 Lybrand well is located directly in the Canadian River channel and its foundation is surrounded by cribbing and piles to protect it against current wash. A story of this work will be found in the December 11, 1930, issue of The Oil and Gas Journal.

During the recent floods this structure served its purpose perfectly and protected the derrick and well connections and thereby averted the possibility of a wild well in a raging torrent. When the flood subsided it was found that the current had washed all of the sand fill from the inside of the cribbing, and it is therefore only necessary to again fill it with sand to put the outfit back into its original condition.

When the well was located in this river channel the engineers for the Phillips Petroleum Co. realized that it would be necessary to protect the connections and derrick foundations against driftwood and high water and this "battleship" type of cribbing was devised. As with the derricks located back from the river channel, the pile used for the river location were of 12-inch casing sunk into pockets blasted in the bedrock. After the pipe was set it was filled with cement and some of the cement forced out to fill the pockets in the bedrock. There was about 26 feet of river sand above the bedrock and during high water this sand was very loose and water soaked and the walers between piles could be shaken, but everything finally settled back into its proper position and protected the derrick.

This experience has proven quite conclusively that with proper forethought and application of good engineering practice exceptional conditions of this kind can be anticipated and damages guarded against, wild wells averted and production continue without interruption.

Tanks Protected

When high water surrounds a battery of field storage tanks it is not an uncommon thing to find that they will float and break their connections and in many instances be moved off their dirt grades by the current.

Many tanks are set in the river bottoms in north Oklahoma City Field and some have been protected against floodwater by high embankments or fills within cribbing. While this method is satisfactory if the grades are made high enough to be above the highest water level of the river during the flood period it is costly.

One way to prevent tanks from floating has been devised by production men in Oklahoma City Field and that was to provide a flange in the tank on the side opposite the pipe line connections. Into this flange a short section of 4-inch pipe is fitted with pipe line sealed valve and a swing check valve so placed that the pressure from the inside of the tank when it is full of oil will keep the flap in place on its seat if the pipe line valve is open.

With this set-up it has been demonstrated that water around the tanks on the outside will flow into the tank when the depth of the water is greater than the depth of the oil inside the tank. As there is some difference in gravity between oil and water the check valve actually opens whenever the differential in pressure is in favor of the fluid level outside of the tank. When the valve opens, water will enter the tank, floating such oil as there may be in it and this water will continue to rise as long as the water level outside of the tank increases. In this way the whole tank can be flooded with water and actually be submerged and never move from its foundations because it is not buoyant, or in other words does not act as an empty or partially emptied vessel in water.

This device saved a number of tanks from floating around in the current during the high water recently. To prevent the taking of oil from the tank through this bull-plug connection the pipe line company fitted one of their usual plug type valves into the short line between the flange and the check valve and this was sealed at all times excepting when broken by lease men when the flood was moving down on the rotary. This valve was normally closed against the tank, but when the seal was broken it was opened and the check valve could then become operative when the water level outside of the tank was high enough to create a differential in pressure.

Transportation Gains From Profit Viewpoint

(Continued from Page 9)

terminals along inland waterways. This development has not come as rapid as expected by some, but reports this year show a substantial gain over a year ago. The Mississippi River shipping facilities and its tributaries are constantly being enlarged. A 6-foot channel has been completed to Kansas City and by next spring the canal system to Chicago will be in operation. Thus the Great Lakes system will be connected to the Mississippi. With the St. Lawrence waterway and the New York state canal, it is pointed out that inland waterways will serve a section which consumes a large part of the gasoline and other petroleum products in the United States.

This discussion has been concerned mainly with developments in gasoline transportation. Although it is the principal product in which refiners are interested, substantial savings are possible in other products. From a percentage standpoint transportation is a much more important factor in the case of fuel oil and other heavy oils than it is with gasoline. As shown in the accompanying tables the cost of rail transportation in the case of the heavy oils runs from 50 cents to $2 per barrel. So far as the Mid-Continent is concerned and many points in the Middle West, the rail charge in the movement of fuel oil and gas oil exceeds the refinery price.

So important has this become at several refining points in the Middle West that Oklahoma and other Mid-Continent refining centers are no longer considered in sales. For many years it was the custom of Middle West refiners to quote on an Oklahoma (Group 3) basis in their heavy oil sales and then absorb whatever freight rate advantage they had over the Oklahoma sellers. This is no longer the practice in shipments to many points. Refiners at Toledo, Detroit, Wood River and Chicago now quote either delivered prices or f.o.b. their plants at prices which are below the Oklahoma market, taking freight rates into consideration. This has been brought about by conditions in which the competition of cheap coal and natural gas has played a part, as well as competition among refiners. The effect of this situation is to shut off the market for refiners where a long rail haul is involved, giving another illustration of the increasing importance of transportation in circumscribing the operations of individual companies.

CONSERVATION RULES ADOPTED FOR CONROE

AUSTIN, Tex., July 2.—First conservation rules, fixing a gas-oil ratio at 2,000 feet of gas per barrel of oil, were adopted Saturday by the Railroad Commission for the newly discoverey Montgomery County oil field near Conroe.

The order does not apply a proration limit on the field, and the commission announced several weeks of detailed study will be given the field before a limit is fixed. R. D. Parker, chief oil and gas supervisor, said the basis probably will be a combination of acreage and potential, and that in any event, acreage will be taken into account.

World Oil Leaders Assemble in Paris To Stabilize Output and Exports

NEW YORK, July 5.—With representatives of leading American, British, Dutch and Rumanian oil companies on hand, and a delegation representing the Soviet oil trust attending, the international oil conference, recently adjourned after a month of deliberations in New York, resumed its sessions in Paris on June 30.

Private advices received here indicated that the first step in the renewed negotiations would be toward the stabilization of Rumania's petroleum industry, involving at the outset a reduction in production, and consequently exports, by that country. American, Dutch and British major companies all have important holdings in Rumania, and are understood to be taking the initiative in pledging curtailment of crude output by their respective Rumanian subsidiaries or affiliates, on condition that the remainder of the Rumanian oil industry co-operate in such a move.

Attending the convention in Paris are Charles E. Arnott, president of Socony-Vacuum Corp., who was instrumental in bringing together the various groups which met in New York last month, and Harold F. Sheets, vice president and a director of Socony-Vacuum. European representatives of Standard Oil Co. (New Jersey), Atlantic Refining Co. and Consolidated Oil Corp. are also understood to be participating in the Paris discussions. Rumania is represented by Constantin Ooisceanu, managing director of Steaua Romana and president of the Rumanian Association of Petroleum Industrialists; Otto Stern of Astra Romana, T. S. Masterson of Phoenix, Jean Marinescu of Concordia, M. N. Constantinescu of Creditul Minier and M. Moriatis of Prahova. European oil interests, it is reported, are represented by J. B. Aug. Kessler, joint managing director of the Royal Dutch-Shell group; William Fraser, deputy chairman of the Anglo-Persian Oil Co., Ltd., and Robert I. Watson, managing director of the Anglo-Persian Oil Co., Ltd., and Shell Transport & Trading Co., Ltd. These delegates attended the New York meetings. The Soviet delegates, whose presence had not been looked for up to the time the Paris meeting was actually called to order, are Philip Rabinovich, member of the Soviet Commissariat for Foreign Trade; K. Tiaboval, chairman of Soyuznefteexport, the Soviet oil exporting trust, and R. N. Fridman, president of Russian Oil Products Co., Ltd., the Soviet marketing agency in the United Kingdom.

The original plan of Mr. Arnott contemplated the consideration of merely the Rumanian angle of the market situation at the present meeting in Paris. With this as a starting point, separate compacts were to be sought with other foreign producing countries, with settlement of the Soviet problem left for the last. The unexpected appearance of the Soviet delegates, however, has entirely altered the situation.

According to private reports from abroad, the Rumanian association of petroleum industrialists was asked to send to Paris delegates empowered to arrive at an agreement regarding production, exports and prices. The Rumanian delegation, however, it is understood, has insisted upon the privilege of returning to Rumania and laying before an assembly of the entire Rumanian petroleum industry any suggested plan involving that country, before committing Rumania's oil industry to any fixed program.

The Soviet delegates, private advices indicate, have come into the Paris gathering with broader powers than those conferred upon them by the Soviet government on the occasion of the recent New York meetings. Expiration of some of the Soviet oil trust's marketing contracts has weakened the position of the Soviet, and it is believed that Russia will now be more receptive to proposals for the outright purchase by major world oil companies of part of her steadily growing surplus output of gasoline and other refined products. It is unofficially reported that the Soviet oil trust is seeking a loan of between $40,000,000 and $50,000,000 from the major American and European oil companies, and that this projected loan may prove a potent weapon in the hands of the European-American group in the negotiations.

It is expected that the Soviet delegations will be prepared to make substantial concessions to the major world oil companies in furtherance of their plan to secure a loan and that some of the major obstacles, which proved insurmountable and prevented an agreement at the New York meetings, will be satisfactorily ironed out during the Paris discussions. The Russian angle, however, is not expected to be taken up until after disposal of the Rumanian problem.

If the plans of the European and American major companies carry out, and the present outlook is favorable for a successful consummation of their proposals, Russia will limit her exports during the next 10 years to an amount not in excess of the 1931 exports by that country, with surplus production to be absorbed by American and European companies at fixed prices for distribution through the regular markting channels of these organizations. The plan of the European and American companies contemplates the cessation by Soyuznefteexport of the establishment of additional marketing organizations in world consuming countries and the resultant duplication of existing distributing facilities already operated by other interests.

MORRIS IS NEW HEAD OF CONTINENTAL SUPPLY CO.

William J. Morris

William J. Morris, financial vice president of the Youngstown Sheet & Tube Co., has been elected president of the Continental Supply Co., subsidiary of Sheet & Tube. He will move from Youngstown, Ohio, to St. Louis, Mo., headquarters of Continental, which distributes oil country equipment through more than 50 stores in the Mid-Continent and Southwest.

Mr. Morris joined the Sheet & Tube organization in 1906. He was its treasurer from 1922 to 1925 and became a vice president of the company in April, 1925. In becoming head of the Continental Supply Co. he takes the place of H. B. Gutelius, who resigned. It is understood that his post as financial vice president of the Sheet & Tube, which he has resigned, will not be filled at once, but that most of his duties will be assumed by W. E. Meub, secretary-treasurer.

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AFTER EAST TEXAS, WHAT?

East Texas was so overwhelmingly big, the greatest oil field the world has ever known, that it staggered the imagination. Coming on the heels of Seminole, Kettleman Hills and Oklahoma City it created the impression of unfailing abundance.

The quick succession of these discoveries has built up an assumption of limitless supply as though any wildcatter might open another East Texas almost anywhere. The fact that there never was a field like East Texas before and its phenomenal character are the best of reasons for assurance that it will not be duplicated.

After East Texas, what? The chances are infinitely against anything like another East Texas.

There have been several "strikes" since East Texas came in but not one of them has opened a pool of more than routine importance.

It is now frankly recognized that the estimates of the country's present total daily potential supply have been exaggerated. But this is of future rather than of present importance.

For the time being, until East Texas is behind us, the industry's big job will be to keep production within bounds. But with East Texas over the hill the picture will be changed.

Neither the world depression nor the flood of oil is going to last forever and each day is bringing us nearer to the end. With a return to increased consumption and a decline in oversupply of crude the oil industry is going to have to make provision for the future.

It is efficiently equipped with means for finding and producing oil where oil can be found but there is no guarantee that it will be found in any such quantities as during the past decade.

We are going to have to resume an exploration campaign that in scope and intensity will far exceed any that has gone before. But before we begin every precaution should be taken to guard against another period of demoralization such as East Texas brought upon us.

This is necessary not only to prevent overproduction but to prevent waste and to secure to each producer his just returns.

This present period of overproduction and consequent slackness teaches a lesson and gives time to apply it.

It has shown the disastrous results of overproduction and has proved the advantages of curtailment in preventing waste, cutting costs and stabilizing the market.

It has convinced and enabled the producers of the great oil-producing states to get together on a practical policy of curtailment.

But, as shown by the recurrent crises over details, this co-operation in itself is not sufficient.

The root of the difficulty lies deeper, in the unrestricted competition between owners in a pool.

This is very clearly brought out in an article by James A. Veasey in the current issue of The Lamp reviewing the United States Supreme Court decision in the Champlin case.

The Supreme Court held in substance that, regardless of property right that right is still subject to the police power of the State when reasonably exercised; that co-equal rights exist among all operators in an oil pool; that it is within the police power of the State to prevent injury to other operators in a pool either by causing them to run oil into earthen storage, surface waste, or depriving them of their share of the reservoir energy, or reducing the ultimate recovery from the pool.

For, as summarized by Mr. Veasey: "Oil operators interested in the same pool have certain co-equal rights. This doctrine arises from the drainage propensities of the oil underground, but more strongly from the function of the reservoir energy, which produces the oil. This energy, by its very nature, resides in common ownership among the operators in the pool and not in individual ownerships."

From which it follows, as W. S. Farish has said, that "the 'legalized piracy' that results from the theory of offsetting protection against drainage must be abolished. The pool itself instead of the individual lease must become the unit of operation."

This is "the new conception" which is the basis of the program proposed in the series of articles which have been appearing in The Oil and Gas Journal under the auspices of Earl Oliver.

Legalized piracy is the basis of overproduction, the premium put upon haste in drilling by the wild game theory that gives oil to whoever captures it.

Before the time comes for the resumption of the search for new oil pools the industry should see to it that provision is made against the continuance of legalized piracy. Curtailment and proration regulations hurriedly put into effect after a pool is discovered do not furnish sufficient protection against overproduction and waste. They do not protect ownership as unified control would.

Old-time operators who believed the oil business was a game, since hunting for oil and capturing it was with them exactly the same as hunting for game and capturing it, served the industry well in the pioneer days but because of lack of present-day knowledge their methods were wasteful and in the light we now have unfair.

New rules are needed to meet newly learned conditions. The old methods dissipated the energy in the reservoir and failed to recover oil that could have been produced. The nation's interest in its natural resources demands that this waste and this failure to recover all the oil possible must be stopped.

The industry, staggering under an overproduction brought about by competitive haste to capture oil before anyone else, regardless of the waste of natural energy and the loss of recoverable oil, has nothing to gain and all to lose by tolerating a continuance of "legalized piracy."

The resulting demoralization of the market and depression of the industry penalizes everyone in it. If curtailment, after a pool is opened, is now admitted to be necessary for the good of all, how much more necessary is it that the original cause of overproduction should be cured?

The decision in the Champlin case goes a long way toward clarifying the legal situation but it is only a beginning. The industry will not be safe until it is able to impose unified control on each pool opened at the outset.

This is the time to press forward to that end, before the passing of East Texas leads to the resumption of exploration on a large scale. Improbable though it may be that we shall ever see another East Texas, so long as there is a surplus of oil hanging over the industry, no chance should be taken of letting another field imperil the situation.

There is no question before the industry that presses for more immediate action.

ON THE LONG JUMP
TO NORTHERN IOWA

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Oklahoma Refinery Market Showing Resistance To Additional Reductions in Quotations

By C. O. WILLSON

The refinery market in Oklahoma (Group 3) the first of the week gave indications of having reached bottom in prices for the immediate future. Prices on gasolines and some of the other principal products are lower than they were a week ago but developments the latter part of last week and on Tuesday of this week indicated that sellers were resisting additional price concessions. Buying of gasoline which experienced a near perpendicular drop the latter part of June following the effective date of the Federal tax of 1 cent, improved over the past few days. An improvement in contract demand and shipments to refinery owned bulk stations was particularly noticeable.

In regard to actual consumption of gasoline several Mid-Continent refiners are more optimistic regarding July and August than they were a month ago. In May and early June some were predicting a loss as high as 20 per cent in gasoline consumption for the summer months. These ultra pessimistic predictions are not being sustained by reports from both large and small distributors. Without complete reports from all companies it is hazardous to make predictions regarding July and August consumption but available information indicates that for the part of the country in which the Mid-Continent is especially interested the demand may run as high as 95 per cent of last year.

Some companies have spent considerable time and money in trying to gauge the probable demand not only for the summer but also for the remainder of the year. There are so many uncertain factors that when the information is compiled they hesitate to make any definite predictions. All of these reports show that unquestionably there is a decrease in the use of the family car in all parts of the country and it is this car that uses the bulk of the gasoline consumed in this country. However, one company official points out that this situation from the standpoint of actual gasoline consumption may not be as bad as feared by some. He says that the car has such a strong hold on the average family in the matter of utility, that they are cutting out practically every other unnecessary form of expenditure before they run the car in the garage and leave it there. He says due to this condition some families are using their cars more than they did a year ago. In the absence of statistical data covering this situation one observer's opinion is as good as another and they are many who will not agree with this opinion. However, if later data do show a near normal domestic consumption it is certain that those who are predicting a general scrapping of family cars due to economic conditions, will have to revise their predictions.

Truck Consumption

Another refiner says the heavy consumption of trucks and other commercial vehicles is tending to offset in part the decreasing demand of the family car. He points out that deliveries of tires and cars by trucks from Akron, Detroit and other points to distributors over distances as great as 1,500 miles are now common. These trucks use from 100 to 500 gallons in a round-trip. The average consumption of the family car for an entire year is around 500 gallons.

Some recent reports of railroads in which they have complained of the increasing competition of trucks tend to substantiate this view of gasoline consumption on the part of trucks. Practically every commodity is now being transported by trucks including perishable products. In the South and Southwest, cotton, grains of all kinds, vegetables, fruits and practically all farm products are being transported from 50 to several hundred miles by trucks. Similar conditions exist in other parts of the country where good roads are available. The refiner previously mentioned says this development is partially a reflection of depressed business conditions, although he believes that truck hauling will continue to expand with a return to normal business conditions. At present some of the trucking is being done by people out of employment who are only interested in making a few dollars a week and are offering rates to shippers not justified by actual costs.

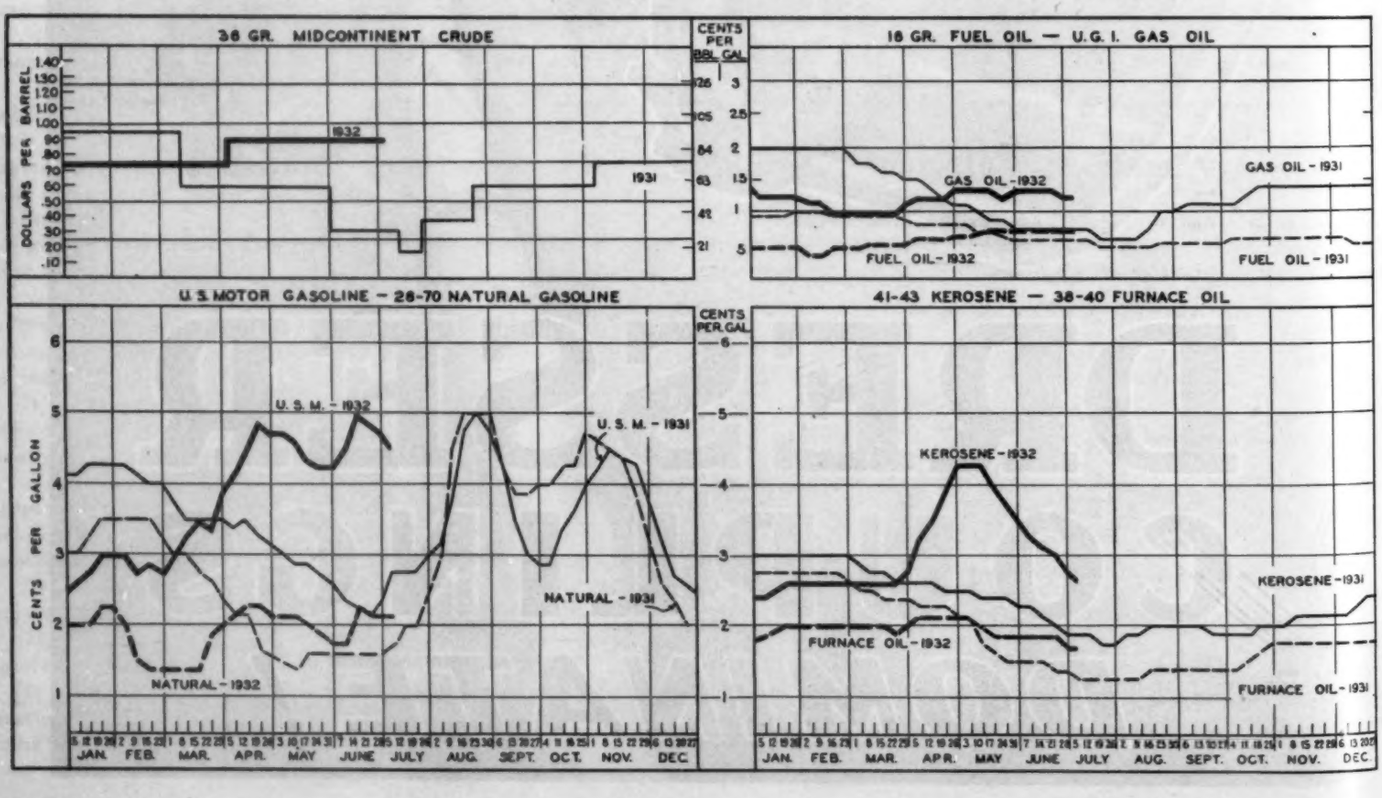
This refiner and others have pointed to the desirability of having a government bureau, A.P.I. or some other agency investigate the present and probable future requirements. They believe that accurate data covering the requirements of the various classes of gasoline consumers would be an aid to refiners and distributors in estimating demand.

Natural Gasoline

Starting in this issue, The Oil and Gas Journal is quoting two additional grades of natural gasoline. This action was taken at the request of a large number of buyers and sellers of the products quoted. The two grades quoted are commonly known as "15 pounds" and "11 pounds" vapor pressure material. For the present the only limitations on these two additional grades will be the maximum vapor pressure and a minimum recovery of 96. It is probable that additional grades will be added in the near future and it is also probable at that time more definite specifications as to the grades will be adopted.

As is generally known in recent months there has been a marked trend toward the lower vapor pressure grades of natural gasoline. This trend has become so important that the lower vapor pressure grades are rapidly becoming the dog rather than the tail of the natural gasoline industry. It has been hoped by many that with the coming of the summer months the demand for higher vapor pressure grades from 22 to 30 pounds would improve and less attention would have to be given to the lower vapor pressure grades. In former years there was a heavy demand from refiners and exporters for the high vapor pressure grades to blend with stored and current refinery production and favorable markets usually resulted. It is now apparent that the demand for these grades will continue to be much less than formerly and manufacturers must rely on the low vapor pressure market to absorb a large part of their output. The bulk of the production of natural gasoline still comes within the 26-70 classification (former Grade AA) but so far as open market trading is concerned the activity is largely in the grades having vapor pressure ranging from 18 to 9 pounds. The 26-70 sales are to a large extent covered by contracts based on open market quota-

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)


38 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1932
1931
CENTS PER BBL
CENTS PER GAL
18 GR. FUEL OIL — U.G.I. GAS OIL
GAS OIL - 1932
GAS OIL - 1931
FUEL OIL - 1932
FUEL OIL - 1931
U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1932
U.S.M. - 1931
NATURAL - 1931
NATURAL - 1932
41-43 KEROSENE — 38-40 FURNACE OIL
KEROSENE - 1932
KEROSENE - 1931
FURNACE OIL - 1932
FURNACE OIL - 1931
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

tions. Due to this fact many manufacturers have found themselves in an unsatisfactory position. The open market demand for the 26-70 has not been active enough to maintain prices in line with the refinery market and also in line with the prices established for the lower vapor pressure grades. For instance at this time, the 26-70 grade is selling in Oklahoma at 2½ cents with some sales made during the week as low as 2 cents. At the same time sellers are getting from 3⅞ to 4⅛ cents for 11-pound material. The 26-70 grade can be made into 11-pound material with a plant loss of not more than 40 per cent. This means that the cost of production of the 11-pound material based on the prevailing market for 26-70 does not exceed 3 cents per gallon. Thus the manufacture of the 11-pound grade has an important advantage over the high vapor pressure grades. This relative condition has been general for several months.

Starting the first of the year when the new natural gasoline grading system became effective several manufacturers had hoped that the 26-70 grade could be made the price basis for all grades, an arbitrary differential being established for grades with higher or lower vapor pressures. As just explained, however, actual market developments have not supported this plan and the market interest has gone to the low vapor pressure material.

In brief, as explained by one manufacturer, the natural gasoline industry finds itself in the position of endeavoring to base its entire market structure on its weakest product. He feels that a change in policy is desirable in which emphasis will be placed on the low pressure grades with the expectation that they can be placed on a parity with refinery gasolines and this in turn will tend to improve the price structure of those manufacturers who continue to manufacture the high vapor pressure material. The fact that all of the special grades are high in antiknock quality and can be used direct as premium motor fuels, due to volatility characteristics, is the ace in the hole of the natural gasoline industry and observers are predicting that it will in the near future, return the industry to its normal relationship to refinery gasolines.

Refined Market Barometer

Price changes reported during the past week were mixed. Quotations at California refineries were advanced although the increase was not as great as the recent advance of 2½ cents in tank wagon and service station schedules made effective in West Coast states. Gasoline prices also are slightly higher at Atlantic seaboard points. At the same time the gasoline price decline in Mid-Continent and Middle West continued. Kerosene was reported generally dull with prices lower where any changes were made. All grades of fuels were generally firm. Natural gasolines weaker in the Mid-Continent and firmer in California. Scattered advances in several grades of cylinder stocks were the only price changes reported. Wax slow.

Mid-Continent—Gasoline prices lower than week ago. Natural gasolines lower. Most grades of kerosene and distillates reduced in price. Fuels and gas oils firm. Lubricants unchanged.

East Coast—Refinery gasolines higher. Slow demand for kerosene. Steady demand for fuel oils. Gas oil quiet. Furnace oil slow. Little new business in wax. Export market on all products slow.

Pennsylvania—Gasoline and kerosene demand slow and prices lower on some grades. No important changes in lubricants. Wax quiet.

Gulf Coast—Market quiet with prices on all products holding firm.

California—Refiners advance gasolines for both local and coastwise movement following recent crude oil advances. Some grades of fuel oil also advanced. Contract fuel prices higher.

Gasoline and Naphtha

Low octane U. S. Motor gasoline slumped to a low of 4½ cents in sales direct to the trade the latter part of last week and that price continued on Tuesday following the Fourth of July holiday. Few reports were available on Tuesday covering the week-end holiday period extending from Saturday through Monday. Weather conditions are favorable and it is believed that the consumption was heavy. Refiners felt that this holiday buying would clean up the storage of many jobbers and they would be in the market for material for shipment previous to July 15. Regarding jobber buying many observers are of the opinion that the pre-tax buying of gasoline was not as heavy as predicted. Some jobbers did buy large quantities but they are the exception rather than the rule. The bulk of jobber buying comes from small jobbers using from 5 to 15 cars a month and these buyers, it is claimed, do not have the facilities for large storage programs. It is also pointed out that the uncertainty regarding the tax collection several days before June 21 resulted in many jobbers deciding not to make purchases for storage purposes. Many orders were canceled previous to June 21 when it appeared that the 1-cent tax would be collected on all gasoline in jobber storage.

There are no changes in the price differentials for the high octane grades and also in regard to the high gravity grades. Spot buying is largely confined to the low octane material, many jobbers apparently being only concerned in securing the lowest possible prices. At the same time there is steady movement on long-time jobber contracts calling for middle octane material.

There are a number of inquiries for the various grades of blending naphthas. Presumably, the refiner does not pay the 1-cent tax on these naphthas when they are sold to natural gasoline manufacturers or jobbers for blending purposes. However, some refiners are not sure of their position in this matter and they are adding the tax. One Texas refiner is reported to have sold 1,000,000 gallons of low endpoint blending naphtha to an exporter. The gasoline will be blended with natural gasoline before movement from the coast. Prices in Oklahoma for the better grades of naphtha ranged from 4½ cents up.

Natural Gasolines

The 26-70 grade of natural gasoline sold in Oklahoma at 2½ cents on Tuesday and 2 cents in Texas. The 18-55 material was 2½ cents low, 18 pounds 3 cents, 11 pounds 3⅞ cents and 9 pounds 4⅛ cents. The greatest spot market demand was for the low vapor pressure grades.

Kerosene and Distillate

Kerosene dropped to a low of 2⅝ cents in Oklahoma in jobber sales for the 41-43 water white grade. Resale material was available as low as 2⅜ cents. Several market observers believe that kerosene prices are on bottom. They expect the demand to improve the latter part of July and with reduced refinery operations, the situation in regard to oversupply is being remedied.

The distillate situation is mixed. There are numerous inquiries in the market from buyers who are willing to make contracts for purchases for the furnace oil season starting September 1. Refiners are not taking on the usual number of these contracts for the reason they are not sure that they will have the material available. At the same time spot buyers who are in a position to take shipments now with the usual credit terms, are able to secure price concessions. The 38-40 grade is selling at a low of 1⅞ cents and the prime white at 2 cents. The 32-36 grade of furnace oil (light) is firm at 1¾ cents.

Other Products

Fuels and gas oils are steady in Oklahoma. The demand for overhead gas oil and topped crudes suitable for cracking is strong. The demand for U.G.I. material is slow but the market is steady. Industrial fuels are holding their own in prices.

The demand for lubricants has shown some improvement from late June and Oklahoma sellers are not giving price concessions on stocks or finished motor oils.

DATA SHOW DEMAND IN CANADIAN PROVINCES

CHATHAM, Ontario, July 2.—With the current year, an ever-increasing demand for data regarding gasoline consumption in Canada has led the Dominion Bureau of Statistics at Ottawa to commence the compiling of monthly statements on the sales of this commodity. The information included in these reports is obtained by the transportation branch of the bureau directly from the various provincial governments, which, through the collection of the gasoline tax, have a check on gasoline consumption.

The first report, issued toward the end of June, covers gasoline sales in the various provinces for the months of January and February. Sales, in imperial gallons, are as follows:

Province—	January	February
Prince Edward Island	36,282	26,075
Nova Scotia	846,503	606,693
New Brunswick	727,565	380,681
Quebec	3,541,490	4,249,359
Ontario	16,651,294	12,862,830
Manitoba	1,259,459	1,081,013
Saskatchewan	1,088,238	780,450
Alberta	2,303,183	1,800,608
British Columbia	2,513,373	2,368,861
Total	29,966,387	24,157,570

IMPERIAL TO RESUME

ARDMORE, Okla., July 5.—The Imperial Refining Co. is reconditioning its local refinery and is expected to resume operations in the near future. The company is seeking crude connections.

American Petroleum Institute Weekly Refinery Statistics

Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks All figures in 42-gallon barrels.

Week Ending June 25, 1932 Compared to Week Ago

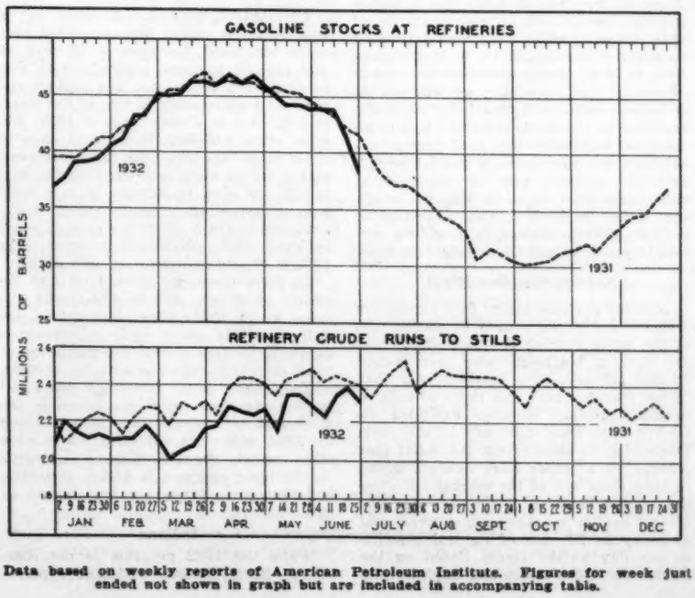
	June 25, 1932 (1)	(2)	(3)	(4)
East Coast	100.0	498,000	5,383,000	7,199,000
Appalachian	91.8	101,300	1,489,000	1,075,000
Ind., Ill., Ky.	98.9	290,800	5,398,000	4,139,000
Okla., Kans., Mo.	89.6	217,600	3,101,000	3,408,000
Texas	91.3	527,300	6,687,000	9,979,000
La. and Ark.	89.3	160,500	1,421,000	5,149,000
Rocky Mtn.	89.4	35,300	1,818,000	683,000
California	96.7	481,300	12,116,000	98,232,000
Total U. S.	95.1	2,312,000	38,913,000	129,864,000
Tex. Gulf	99.8	420,600	5,375,000	7,425,000
La. Gulf	100.0	109,800	1,322,000	4,375,000

Figures for the week ending July 2 are not available on account of the July 4 holiday.

Week Ending June 25, 1932 Compared to Year Ago

	Week ended June 27 (1)	(2)	(3)	(4)
East Coast	100.0	461,300	7,558,000	9,424,000
Appalachian	91.8	103,300	1,558,000	1,235,000
Ind., Ill., Ky.	96.6	321,300	6,311,000	3,766,000
Okla., Kans., Mo.	89.6	282,300	3,384,000	4,692,000
Texas	91.3	547,100	7,927,000	10,342,000
La. and Ark.	98.9	177,600	1,541,000	2,602,000
Rocky Mtn.	89.3	46,100	1,833,000	862,000
California	96.5	472,900	11,856,000	93,122,000
Total U. S.	94.7	2,416,900	41,363,000	131,045,000
Tex. Gulf	99.8	414,600	6,777,000	7,377,000
La. Gulf	100.0	113,900	1,433,000	1,662,000

Figures for the week ending July 2 are not available on account of the July 4 holiday.



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table.

Improvement in Chicago Motor Fuel Situation As Demand From Jobbers Shows Gains

By ROBERT C. CONINE
Chicago Bureau, The Oil and Gas Journal, 6 North Michigan Ave.

CHICAGO, July 5.—Gasoline consumption in Chicago district has been on a considerably higher level than the trade had anticipated, and the Independence Day holidays have brought a rush of business to the service stations that might rectify in a large measure the undenied assaults on the market structures by a comparatively small number of refiners and marketers. The gasoline tank car markets are immediately influenced by activities which would have been considered insignificant earlier in the year. The 2,500,000-gallon decline registered recently in the gasoline stocks at refineries, in transit and in pipe lines, is considered, correctly or otherwise, to have swelled the stocks in the hands of distributors and jobbers to a point where the markets are practically saturated. It is not denied that jobber buying is at a low level, but the activity is no less than at other periods when the refiners were in a much less favorable statistical position. Marketers who would like to see the markets strengthen, point out that a lull in jobber buying is by no means the same as a slump in consumer demand, and the very fact that wholesale business considers its stocks large enough to hold out for lower prices should dictate to the refiners the selection of this time to get out of the open markets. Certain companies, such as Pure Oil Co. at Toledo, have taken advantage of the inactive markets to shut down for repairs.

Speedy Recovery Expected

In spite of the heavy holiday demand the unfavorable factors mentioned above served to lower the gasoline tank car markets another eighth of a cent, with the refiners indicated as the source of all the trouble quoting considerably lower prices on small lot orders, for resale or to the trade. An encouraging sign is the stand taken by some of the smaller refiners in the district, Globe Oil & Refining Co., particularly. A representative of this company said: "We would be glad to sell the low octane U. S. Motor gasoline at 4½ cents, probably an eighth above the low today, but we will not do it because such an action helps place the markets on the weak side, and this is no time to jeopardize the slim profits exorbitant taxation permits the industry." It is interesting to note that the price of this company to one of its biggest customers, Sears Roebuck & Co., according to records of both sources, is 5 cents a gallon, Group 3, on the nonpremium gasoline.

Natural Gasoline Rival

Natural gasoline motor fuel blends are without doubt the source of nine-tenths of the price cutting troubles throughout the district. Marketers who have turned to this business as a specialty say that in no previous year has their volume of natural gasoline business extended on such a high level this late in the year. Disproving to some extent the belief that jobbers as a whole have enough stocks to keep them out of the market till after the current holidays, is the fact that one of the smaller marketers last week sold as many as 20 cars of natural gasoline in one day to the trade. Based on the figures for today's blending naphtha and natural gasoline markets, and ignoring the possibilities in connection with the operation of the state and Federal taxes, the blender can produce motor fuel at a cost of 3¾ cents a gallon, Group 3.

Chicago district refined products markets are as a rule lower than the Mid-Continent markets. Marketers in Chicago Monday had clipped an eighth of a cent from the natural gasoline markets making the new Group 3 prices in Chicago district as follows: AA grade, 1⅞ cents; 26-70, 2 cents; 22-pound, 2¼ cents; 20-pound, 2⅜ cents; 18-pound, 2⅝ cents; 15-pound, 2¾ cents; 12-pound, 4 cents; 11-pound, 4⅛ cents, and 9-pound, 4⅜ cents. The 15-pound material, said by the sellers to have an octane rating of 75, recovery of 96 per cent, is probably the most popular of the grades. The cost to the trade of a middle octane bracket motor fuel made of 80 per cent naphtha or U. S. Motor gasoline, at 4⅜ cents a gallon, and 20 per cent natural gasoline at 2¾ cents a gallon, is 4.057 cents a gallon. By using less desirable naphtha, such as materials known as high test kerosene or petroleum spirits, this cost can be reduced. These blends are making life pleasant for the trackage station operators, especially those who are large enough to pick up "ahead of the tax material" and so pocket the 1-cent Federal tax.

Gasoline Markets

As mentioned above, several ordinarily insignificant factors are causing serious disorder in the gasoline tank car markets in Chicago district. Prices have moved down another eighth of a cent, but in the background the feeling is strong that a recovery will come about early this week. The demand situation is much more favorable than has been expected, and it is seriously thought that jobbers and distributors who stocked heavily during the tax anticipation flurry will be forced to take an active buying position shortly. With the additional cost, or rather investment, represented by the 1-cent-a-gallon Federal tax (not subject to discount, naturally), the buyer will be forced to hedge a bit in his purchases and this may prove a curb on much of the speculative buying which brought trouble in the past. At any rate, it is difficult to see anything favorable in the Federal levy and this consideration may be thought of by incorrigible optimists. Another factor which will hamper the gasoline tank car markets as well as the service station and tank wagon markets is the continued weakness in the natural gasoline markets. At this time it appears that most of the natural in the Mid-Continent is headed for Chicago district.

Tank car gasoline prices Monday were as follows: U. S. Motor, 4⅜ to 4⅝ cents; 60,62, 400 endpoint gasoline, 4½ to 4¾ cents; 64-66, 375 endpoint gasoline, 4¾ to 5 cents; aviation, fighting grade (not antiknock), 5⅜ to 5⅝ cents; 68-70, 360 endpoint gasoline, 4⅞ to 5⅛ cents.

Naphtha

The naphtha tank car markets opened the week with much better prospects than last week. The threat of price cutting has been practically removed by the effective factor of limited supply. The closing down of several important producing sources has laid comparatively heavy demands on other operators who are reporting their naphtha stocks at the lowest level in years. The effect has been to prevent the expected quarter of a cent reduction last week, and the question now is how much the naphtha tank car markets will advance this week. Stoddard solvent did advance a quarter of a cent Monday, and other products are considered in line for similar boosts.

Kerosene

The kerosene tank car markets continue weak and inactive. There is little prospect for a betterment soon in the kerosene markets and lower quotations are being made here and there. The ruling markets are unchanged from last week with the prices at 2¾ to 3 cents for the 41-43 water white material, and 3 to 3⅛ cents for the 42-44 water white material. The range in the higher gravity kerosene was narrowed an eighth of a cent.

Distillates and Fuel Oils

There was practically no change in the fuel markets Monday, although slightly more interest is being taken in materials suitable for cracking stock. There is more firmness in the heavier fuel oils. Effective July 1, Standard Oil Co. of Indiana revised its distillate and fuel oil tank wagon contracts.

Prices on the new contract are as follows: All of the oils are known now as Stanolex Nos. 1, 2, 3 and 4, respectively. No. 1, 36-40 light straw zero, 6 cents in quantities of 100 gallons or more; No. 2, 30-34, straw zero, 5.50 cents in quantities of 150 gallons or more; No. 3, 22-26, zero fuel oil, 4.75 cents in quantities of 200 gallons or more; No. 4, 12-16, zero fuel oil, 4 cents in quantities of 400 gallons or more. Viscosity of No. 4 fuel oil is 90-115 at 100° F.

Reports From Sixteen States Show Increase In Road Oil and Asphalt Demand

By ROBERT C. CONINE

CHICAGO, July 5.—A check of 16 representative states just completed indicates continued development of road oil and asphalt business generally with surprisingly few recessions. The asphalt and road oil requirements of two of the states in 1932 will be double those of 1931. Another state will buy 33 per cent more of these materials this year than last year, and a fourth state will increase its buying 25 per cent. In another state a highway construction program which represents an increase of 25 per cent in roadbuilding and rehabilitation work over 1931 is viewed favorably by authorities.

In three more states road oil and asphalts purchases will be practically the same as in 1931, while four states are still uncertain as to their requirements in 1932. In two states the purchases of road oils and asphalts will be smaller, slightly, than in the preceding year, and in one state an ambitious program for 1931, met with adversities which continue in 1932 with less deterrent force. One state reports frankly that an extensive roadbuilding program is highly desirable, but that state funds are too limited at this time.

Indiana

While the 1932 program is not completed, R. S. Bosart, assistant superintendent of maintenance, reports, the state of Indiana will use approximately twice as much asphalt and road oil in 1932 as was used in 1931. During the fiscal year ending September 30, 1931, road construction materials purchased by the state were as follows: 2,960,453 gallons of various grades of asphalts; 195,708 gallons of tar; 902 gallons of cresote oil; 6,346,608 gallons of road oil. Specifications were revised recently.

Missouri

During the year of 1931 the State of Missouri used approximately 4,500,000 gallons of road oil, and approximately 450,000 gallons of asphalts of various types. In 1932 contracts were let by the state for approximately 8,500,000 gallons of road oil, and about 300,000 gallons of asphalts, according to T. H. Cutler, chief engineer of the state highway department.

Virginia

A comparatively large use of road oils was witnessed in Virginia in 1932, when this business for the state totaled 13,000,000 gallons. This is a residual oil of 15-30 specific viscosity at 50° C., distilling as follows: To 150° C., not less than 5 per cent; to 200° C., 24-28 per cent; to 205° C., not more than 30 per cent. In 1933 an increase of 25 per cent or more is expected, according to C. S. Mullen, chief engineer of the highway department, due to the taking into the state system all county roads. The department is a heavy user of lubricating oils and gasoline, purchasing 150,000 to 200,000 gallons of the former and 3,300,000 gallons of the latter. Bids for half these quantities will be advertised September 1.

Minnesota

A considerable increase in purchases of road construction materials has been authorized for 1932. A good increase in the requirements of all petroleum products is noted, and there is a slight increase in the quantity of coal tar to be used. Comparative figures for 1931, purchased, and 1932, authorized, follow: Road oil, 80-180 Saybolt furol viscosity at 140° F., 11,035,000 gallons; road oil, 150-300 Saybolt furol at 140° F., 2,292,000 gallons; coal tar, 2,568,000 gallons; asphalt, 498,000 gallons. This is a total of 16,393,000 gallons for 1931. The total for 1932 is 20,066,000 gallons, as follows: Road oil, 80-180 furol, 12,040,000 gallons; road oil, 150-300 furol, 4,484,000 gallons; coal tar, 2,612,000 gallons; cutback asphalt, 930,000 gallons. In so far

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Holiday Buying Stimulates Eastern Motor Fuel Market and Quotations Are Advanced

By A. E. MOCKLER

New York Bureau, The Oil and Gas Journal, Rooms 1919-21, No. 154 Nassau Street

NEW YORK, July 5.—Heavy gasoline buying in anticipation of holiday demand over the July 4 week-end, coupled with a continued hot spell over the entire East Coast marketing area, made for considerable activity in refinery gasoline markets during the past week, and a strong undertone ruled throughout, with recent price advances fully maintained in the majority of cases. Distributors who stocked up heavily during the early part of the week were forced back into the market at the week-end for additional supplies, and refinery shipping departments were taxed in keeping shipments moving out on schedule. In the retail division of the market, tank wagon delivery departments likewise rushed in keeping retailers' tanks filled.

Resumption of the international oil conferences in Paris this week has given new impetus to the move for an international accord for the stabilization of world oil markets, and while conflicting reports have reached here from Paris regarding the outlook for a satisfactory outcome of the current series of meetings, general sentiment in oil circles appears to be optimistic as to the outlook. While officially only one of the major American companies has its executives in Paris for the meeting, other American companies are in close touch with the Paris gathering and will keep themselves fully informed of the progress of the conferences. The Rumanian delegation has gone to Paris with the avowed intention of extending the fullest co-operation in any satisfactory plan for rationalization of world markets, and the Soviet oil syndicate is also expected to make known its willingness to go further toward reaching a solution than it was in position to do at the recent New York meeting.

Little Export Buying

Higher markets for California crude, together with the indications of a possible further increase in Mid-Continent fields, have imparted a definitely strong undertone to refined products markets. The principal remaining drawback in the market's current position is the lack of export buying, but it is felt that the decrease in imports of crude oil and products will in large measure offset declining exports, during the summer months at least. The East Coast markets have assimilated the mport duties and excise taxes with a minimum of market disturbance, and aside from some slight uncertainty regarding certain phases of the fuel oil duties, the new taxes are already established as regular market factors.

There were no price revisions of major importance on refined products in the East during the week, the only important change being the action of Standard Oil Co. of New York, effective July 1, in adjusting its posted tank wagon and service station prices through the elimination of odd fractions in quotations.

Refinery Gasoline

Continued firmness featured the bulk gasoline market during the past week, and recent advances were firmly maintained on all grades. Independents who had previously been underselling the general market are now working their prices up to the levels established by the major refiners. Republic Oil Co., which had been one-half cent under the general market at New York and Baltimore, advanced its schedule effective June 30.

Extreme hot weather has stimulated the demand for U. S. Motor gasoline under 65 octane number, and the market is one-half cent higher at New York at 7¾ to 8¼ cents in tank car lots f.o.b. terminals, price varying with seller. Warner-Quinlan is the only refiner now quoting 7¾ cents, and is expected to advance to the general 8-cent level. At other East Coast ports the market is likewise active and firm, with Boston quoting 7 cents per gallon, Baltimore 7 to 8¼ cents, and Charleston 7¾ to 8¼ cents per gallon.

Demand for U. S. Motor gasoline of 65 octane number and above continues strong, and the market is firm at recently advanced levels. The New York market is now quoted at a range of 8¼ to 8¾ cents per gallon, tank car lots at terminals, with Standard of New Jersey and Texaco quoting the top prices. Shipments were heavy during the week, and an exceptionally brisk demand developed over the week-end, when holiday buying sent gasoline gallonage soaring to record high levels for this year.

Shell, Colonial-Beacon and Socony continue to quote the tank car market on a differential basis, naming delivered prices at specified amounts under posted service station prices at point of delivery, with minimum quotations at tidewater terminals.

Tank Wagon Gasoline

The only general revision reported in Eastern markets last week was that named by Standard Oil Co. of New York, effective July 1, whereby the company sought to restore some uniformity to its posted schedules. All tank wagon quotations were leveled to flat figures, or halfs. Where the tank wagon quotations had been 14.1 to 14.2 cents per gallon, the quotation was revised to a flat 14 cents, and where 14.3 or 14.4 cents had been quoted the price was made a flat 14½ cents. The posting of retail prices in fractions, it is understood, did not meet with the approval of either the retail distributors or consumers.

Gasoline gallonage was exceptionally heavy throughout the East during the entire week. With the Atlantic seaboard sweltering in a heat wave there was a perceptible increase in motoring, and service stations were establishing new high sales totals for the year. The Fourth of July holiday was celebrated as a triple holiday in many instances, and gasoline sales in the so-called vacation territory recorded sharp increases.

With the tank car market exceptionally strong, and retail prices not yet fully reflecting recent advances at the refinery, a higher retail basis is looked for in the near future. The current narrowing of the spread, however, has tended to sharply curtail the activities of price cutters, and the market is working into more stable position. In metropolitan New York territory there is not only no field whatever for price cutting operators but legitimate jobbers as well are suffering seriously from the continued maintenance of an abnormally low price level here, as compared with nearby sections.

Kerosene

Sluggish demand for kerosene ruled throughout the period, and the refinery market had eased off somewhat. Spot 41-43 water white in tanker lots was freely offered at 5½ cents per gallon, f.o.b. terminals, with few takers, and the posted price of 6 cents maintained by at least one large seller appeared to be entirely out of line. With Pennsylvania refiners offering at an average price of 5 cents per gallon, local refiners are running into sharp competition from this source in some parts of the territory.

There was little activity in tank wagon kerosene markets during the week, and prices were quotably unchanged throughout the territory.

Fuel Oil

Contract withdrawals were well maintained in the bunker oil market last week, and a slight increase in spot business had also made its appearance. Refiners continue to hold the market at 85 cents per barrel, in bulk, at refinery terminals at principal East Coast ports.

The higher prices which developed on fuel oil at the Gulf during the week brought about a better feeling locally, and the advance in California crude oil quotations was expected to be reflected in an early advance in Pacific Coast fuel oil prices.

Sharper Mexican competition in foreign fuel oil markets is indicated by the sharp drop in Panuco crude prices which has developed since the American import duties on fuel oil became effective.

Diesel Oil

A broader demand for Diesel oil developed locally during the past week and the market remained firm at the recently advanced price level of $1.65 per barrel, in bulk, f.o.b. terminals within harbor limits. While marine demand is still accounting for the bulk of the current movement of Diesel oil, refiners report an encouraging trend toward greater domestic industrial utilization of Diesel oils.

Gas Oil

Seasonal quiet continues in evidence in the gas oil market, and the posted price of 4 cents per gallon continues in effect, this applying to tank car shipments at terminals. Large gas manufacturing companies have curtailed their contract withdrawals, in line with the summer drop in gas consumption, and continued slackness is expected in this division of the market until next fall.

The demand for low-grade gas oils for heating purposes is also at an end for this season, and refiners are expected to curtail production as much as possible during the summer months to avoid the accumulation of bothersome excess stocks which would have to be worked off during the closing quarter of the year.

Furnace Oil

Very little spot business was passing during the week, although major markets are doing a good business in furnace oil used for hot water heating purposes in large office buildings. Many of the oil burner manufacturers have met with considerable success this year in marketing an attachment for domestic oil burning installations for maintenance of a hot water supply through the summer months, and deliveries of domestic heating oils this summer are expected to establish new high gallonage records.

Major marketers have their contract business for the 1932-33 heating season lined up in good shape and indications point to further gains in gallonage during the coming season. Oil burner prices are now at the lowest levels in the history of the industry, and notwithstanding current economic conditions, burner manufacturers are meeting with considerable success in their selling campaigns. Installment financing of these installations, giving purchasers as much as two years to pay for their burners, coupled with the demonstrated comfort and convenience, as well as economy, of the oil burners is stimulating sales substantially.

Petrolatum

There has been some improvement in demand for snow white and lily white, and the market is holding steady at 6⅝ cents and 5⅝ cents per pound, respectively. Cosmetic and pharmaceutical manufacturers did not cover on contract in their usual volume during the early part of the year, and considerable buying for current requirements has resulted.

Movement of the lower grades continued along routine lines, no price changes developing during the week. Export business remains at a low ebb.

Paraffin Wax

Sluggish markets were again reported during the past week on both crude scale and fully refined grades. Domestic consumers continue to limit purchases to actual requirements, and are endeavoring to force price concessions when they do buy. Refiners, on the other hand, are endeavoring to stabilize the market at quoted price levels, and the situation is at more or less of a stalemate at the present.

Lubs

Although buying had slowed down somewhat, there was a steady undertone reported in the cylinder oil market throughout the week, with prices holding firm at recently advanced price levels. Refiners have curtailed their operations somewhat since the recent rush to produce and ship stocks before the excise tax went into effect.

Demand for industrial lubs was rather slack throughout the period. Many large consuming manufacturers bought extensively during the early part of June, taking in stocks for several months ahead to avoid payment of the excise tax of 4 cents per gallon. These consumers, it is expected, will be out of the market until next fall, when refiners look for considerable replacement buying. There was no price changes on red or pale oils during the week.

Gulf Export Market

Continued quiet was in evidence in the Gulf export market during the week. A French inquiry for 4,000 tons of 64-66 naphtha, August shipment, was again reported, but nothing developed in the way of closing this business. It was reported from abroad that the buyer had been quoted 4⅜ cents per gallon c.i.f. French port, on this business, which would figure out roughly 3¾ cents Gulf, but export operators were frankly skeptical about this report. The nominally quoted price on 64-66 at the Gulf was 5 cents per gallon, and it was considered likely that a firm bid at 4¾ cents per gallon for prompt shipment might bring out some offerings, although August shipments was another matter entirely.

Foreign buyers hitherto have met with some success in forcing down prices in an unsettled market by widely disseminating reports of alleged firm offerings at extremely low prices, but export operators now are generally "fed up" on this method of operation, as one operator put it, and promptly discount such reported deals.

Panuco crude has weakened substantially since the fuel and crude oil tariff became effective, and offerings were reported last week as low as 45 cents per

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REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21

Gasolines

	July 5		June 28	
OKLAHOMA (Group 3)—				
*U. S. Motor	.04½	.05	.04¾	.05⅛
60-62 400	.04⅝	.05	.05	.05¼
64-66 390	.04¾	.05⅛	.05¼	.05½
64-66 375	.04⅞	.05¼	.05½	.05⅝
68-70 350	.05	.05⅛	.05⅝	
NORTH TEXAS—				
*U. S. Motor	.04½	.04¾	.04⅝	.04⅞
60-62 400	.04⅝	.04¾	.04¾	.05
64-66 390	.04¾	.05	.04⅞	.05
64-66 375	.04¾	.05¼	.05	.05⅛
64-66 360	.04⅞	.05⅛	.05⅛	.05¼
†NORTH LOUISIANA—				
*U. S. Motor	.05¼	.05½	.05¼	.05½
60-62 400	.05⅝	.05½	.05⅝	.05½
†ARKANSAS—				
*U. S. Motor	.05¼	.05½	.05¼	.05½
CHICAGO Based on Okla. (Group 3)—				
*U. S. Motor	.04⅝	.04⅝	.04½	.04¾
60-62 400	.04½	.04¾	.04⅝	.04⅞
64-66 375	.04¾	.05	.04¾	.05
Aviation fighting grade	.05⅝	.05⅝	.05⅝	.05⅝
68-70 360	.04⅞	.05⅛	.05	.05¼

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On July 5, in the case of the U. S. Motor and 60-62 400 endpoint grades where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.06½	.06¾	.06½	.06¾
60-62 400	.06⅝	.06¾	.06⅝	.06¾
64-66 375	.06¾	.07	.06¾	.07
68-70 350	.06¾	.07⅛	.06¾	.07⅛

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas.

CALIFORNIA (domestic movement only)—				
54-58 U. S. Motor	.06	.07	.06	.06½
58-60 400	.06½	.07½	.06¼	.06¾
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.06¾	.07¼	.06½	.07¼
Boston	.07		.06½	
Baltimore, Md.	.06¾	.07	.06½	.06¾
Charleston, S. C.	.06¾	.07	.06¾	.07
U. S. Motor, 65 octane and above:				
New York (Bayonne)	.07¼	.07½	.07	.07¼
Boston	.07½		.07¼	
Baltimore, Md.	.07¼	.07½	.07	.07¼
Charleston, S. C.	.07½	.07¾	.07¼	.07½
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.05¼	.05½	.05½	.05¾
U. S. Motor, below 65 octane number	.05	.05¼	.05¼	.05½

Naphthas

OKLAHOMA (Group 3)—	July 5		June 28	
50-52 450 (blending)	.04½	.04¾	.04½	.04¾
PENNSYLVANIA (inland refineries)—				
50-54 420-450 (blending)	.06¼	.06¾	.05⅞	.06¼
ARKANSAS—				
48-50 450 (blending)	.05	.05⅛	.05	.05⅛
CHICAGO Based on Okla. (Group 3)—				
50-52 450 (blending)	.04⅝	.04⅝	.04½	.04¾
Cleaners' naphtha, 56-58 gr. 200 i.b.p.-320e.p.	.06½	.06¾	.06½	.06¾
Lacquer diluent, 180 i.b.p.-250 e.p.	.08½	.08¾	.08½	.08¾
Lacquer diluent, 140 i.b.p.-200 e.p.	.09	.09¼	.09	.09¼
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¼	.06½	.06¼	.06½
Stoddard solvent, 300 i.b.p.-410 e.p. over 100° flash	.05¾	.06	.05½	.06
Pet. thinner, 290, 300 i.b.p. 415 e.p., over 83° flash	.05¼	.05½	.05¼	.05½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06	.06¼	.06	.06½
Petroleum spirits	.04⅛	.05¼	.04⅛	.05¼

Natural Gasolines

	July 5		June 28	
OKLAHOMA (Group 3)—				
Grade 18-55	.02½	.02⅝	.02⅝	
Grade 26-70	.02⅛		.02¼	
Grade 30-70	.02		.02⅛	
*Special grades:				
15 lb. v.p. (max.)	.03	.03⅛		
11 lb. v.p. (max.)	.03⅛	.04		
NORTH TEXAS—				
Grade 18-55	.02½		.02⅝	
Grade 26-70	.02		.02⅛	.02¼
Grade 30-70	.01⅞	.02	.02⅛	
*Special grades:				
15 lb. v.p. (max.)	.02⅞	.03⅛		
11 lb. v.p. (max.)	.03⅛	.04		
NORTH LOUISIANA—				
Grade 26-70	.02¼		.02½	
CALIFORNIA—				
75-78 375	.04½	.05½	.03¾	.04¼

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All grades have maximum recovery of 96 (natural gasoline method).

Kerosenes

(All kerosenes water white)

	July 5		June 28	
OKLAHOMA (Group 3)—				
41-43	.02⅝	.02¾	.02¾	.03
42-44	.02¾	.03	.03	.03¼
NORTH TEXAS—				
40-41	.02½	.02¾	.02⅝	.02¾
41-43	.02½		.02½	.02⅝
†NORTH LOUISIANA—				
41-43	.03¼	.03½	.03½	
42-44	.03½		.03¾	
†ARKANSAS—				
41-43	.03¼	.03½	.03½	
PENNSYLVANIA (inland refineries)—				
45	.04¾	.04⅞	.04⅞	.05
46	.04⅞	.05	.05	.05⅛
47	.05	.05¼	.05⅛	.05⅜
CHICAGO (Based on Group 3)—				
41-43	.02¾	.03	.02¾	.03
42-44	.03	.03¼	.03	.03¼
*CALIFORNIA—				
38-40 high burning test	.04½	.04¾	.03¾	.04¼
NEW YORK (Bayonne, N. J.)—				
41-43	.05½	.06	.05½	.06
GULF COAST (domestic)—				
41-43 water white	.04¼	.04½	.04¼	.04½

*For Pacific Coast consumption.

†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

	July 5		June 28	
OKLAHOMA (Group 3)—				
39-40 prime white	.02	.02⅛	.02⅛	.02¼
38-40 light straw	.01⅞	.02	.01⅞	.02
NORTH TEXAS—				
38-40 light straw	.02	.02⅛	.02	.02⅛
CHICAGO (Based on Group 3)—				
38-40 light straw	.01⅞	.02	.01⅞	.02
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.04	.04¼	.04	.04¼

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

	July 5		June 28	
OKLAHOMA (Group 3)—				
32-36 straw	.01¾		.01¾	
36-38 straw	.01¾	.01⅞	.01¾	.01⅞
38-40 straw	.01¾	.02	.01¾	.02
39-41 prime white	.02	.02⅛	.02⅛	.02¼
NORTH TEXAS—				
38-40 straw	.01¾	.02	.01¾	.02
†NORTH LOUISIANA—				
36-40	.02¼	.02½	.02¼	.02½
†ARKANSAS—				
32-36	.02¼	.02½	.02¼	.02½
CHICAGO (Based on Group 3)—				
32-36 straw	.01⅝	.01¾	.01⅝	.01¾
38-40 straw	.01¾	.01⅞	.01¾	.01⅞
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03¼	.03½	.03¼	.03½
NEW YORK (Bayonne, N. J.)—				
32-36	.04	.04½	.04	.04½
36-40	.05	.05½	.05	.05½

*Above prices are for furnace oils of zero cold test under 190° F. flash and good odor.

†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

	July 5		June 28	
OKLAHOMA (Group 3)—				
32-36 (G.O.) cracking stock	.01⅜	.01½	.01⅜	.01½
U.G.I. (G.O.)	.01¼	.01⅜	.01¼	.01⅜
32-36, zero to 15 (G.O.) high flash	.01⅜	.01½	.01⅜	.01½
28-30, zero to 10	.52½	.55	.52½	.55
26-30, zero to 10	.50		.50	
24-26	.42½	.45	.42½	.45
20-22	.40	.45	.40	.45
16-20	.35	.40	.35	.40
Below 16	.32½	.35	.32½	.35
NORTH TEXAS—				
32-36 (G.O.) industrial	.01¼	.01⅜	.01¼	.01⅜
22-26	.45	.50	.45	.50
Below 20	.35	.45	.35	.45
†NORTH LOUISIANA—				
32-36 (G.O.) zero	.02		.02	
14-16	.35	.40	.35	.40
†ARKANSAS—				
32-36 (G.O.) zero	.02		.02	
14-16	.32½	.35	.35	.40
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.01¼		.01¼	
28-30 (zero)	.55	.60	.55	.60
22-26	.40	.45	.40	.45
18-22	.25	.30	.25	.30
Below 18	.22½	.27½	.22½	.27½
PENNSYLVANIA (inland refineries)—				
36-40	.03	.03¼	.03	.03¼

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
50-34 (G.O.) per bbl.	.70	.85	.70	.85
27 plus Diesel	.70	.85	.70	.85
15-19 Bunker (at tidewater)	.55	.75	.55	.75
15-19 Bunker (cargo lots)	.50	.65	.50	.65
15-19 Bunker (tank car)	.45	.65	.45	.65
GULF COAST—				
28-30 (G.O.)	.03	.03⅛	.03	.03⅛
28-30 Diesel	1.50		1.50	
Bunker C (bulk cargoes)	.55	.60	.55	.60
Bunker C (bunkers)	.70		.70	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
†Bunker C	.85		.85	

*Lighterage 6½ cents per barrel.

†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

	July 5		June 28	
Breeze (screenings)	3.50	3.75	3.50	3.75
Still runs	3.75	4.00	4.50	4.75
Lump and egg	5.00	5.50	5.00	5.50

*Refiners will absorb freight up to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

	July 5		June 28	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09½	.09½	.09½	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½
300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13

500-4.5	.13¼	.13½	.13¼	.13½
100-2 Paraffin Oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.15	.16	.15	.16
10 pour test	.14	.15	.14	.15
15 pour test	.13½	.14½	.13½	.14½
25 pour test	.12¾	.13¼	.12¾	.13¼
30 pour test	.12¾	.13	.12¾	.13
180 vis., No. 3, 25 pour test	.15¾	.16½	.15¾	.16½
200 vis., No. 3:				
Zero pour test	.22	.23½	.22	.23½
10 pour test	.21	.22	.21	.22
15 pour test	.19½	.20	.19½	.20
25 pour test	.18	.18½	.18	.18½
30 pour test	.17¾	.18	.17¾	.18
GULF COAST—				
Pale Oils:				
100-2-2½	.05		.05	
200-3	.06½		.06½	
300-3	.07		.07	
500-3½	.08	.08½	.08	.08½
750-3½	.09	.09½	.09	.09½
1,200-3½	.10½	.11	.10½	.11
2,000-4	.12	.12½	.12	.12½
Red Oils:				
200-5-6	.05	.05½	.05	.05½
300-5-6	.05½	.06	.05½	.06
500-5-6	.06¾	.07	.06¾	.07
1,200-5-6	.09½	.10	.09½	.10
2,000-6 plus	.11	.11½	.11	.11½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.07¾	.08	.07¾	.08
200-2½-3	.07¾	.08	.07¾	.08
300-3-3½	.08¼	.08½	.08¼	.08½
350-3-4	.08¾	.09	.08¾	.09
400-3-4	.09¼	.09¾	.09¼	.09¾
450-3-4	.09¾	.10	.09¾	.10
550-3-4	.10¼	.11	.10¼	.11
Red Oils:				
200-4½-5	.07	.07¼	.07	.07¼
300-5-6	.07½	.07¾	.07½	.07¾
350-5-6	.07¾	.08	.08	
400-5-6	.08	.08¼	.08¼	
450-5-6	.08¼	.08½	.08½	
500-5-6	.08½	.08¾	.08½	.08¾
600-5-6½	.08¾	.09	.09	.10
700-6½ plus	.09	.09¼	.10	.10½
750-6½ plus	.09	.09½	.10½	.11½
900-6½ plus	.12	.13½	.12½	.14
NEW YORK (Bayonne, N. J.)—				
Paraffin Oil:				
25 pale	.10¼		.10¼	
28 pale	.07¼		.07¼	
280 red	.12½		.12½	
250 red	.11½		.11½	
225 red	.10		.10	
200 red	.09¼		.09¼	
PENNSYLVANIA—				
122-124	.02		.02	
124-126	.02	.02¼	.02	.02¼
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02½		.02½	
125-127	.03		.03	
130-132	.03⅜		.03⅜	
133-135	.04		.04	
135-137	.04⅛		.04⅛	
Petrolatum in barrels in carload lots:				
Dark green	.01¾		.01¾	
Amber	.02⅛		.02⅛	
Extra amber	.02⅝		.02⅝	
Cream	.04⅝		.04⅝	
Lily white	.05⅝		.05⅝	
Snow white	.06⅜		.06⅜	

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	July 5		June 28	
630 light green	.07¾	.08	.07¾	.08
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stock:				
190-200 D	.23		.23	
150-160 D, 0-10	.22		.22	
150-160 D, 10-25	.21½		.21½	
150-160 D, 25-40	.21		.21	
150-160 E	.21		.21	
PENNSYLVANIA—				
600 S.R.	.14	.15	.14	.15
650 S.R.	.17	.17½	.17	.17½
600 Pennsylvania flash	.18	.18½	.18	.18½
600 D filtered	.22½	.23	.22½	.23
600 E filtered	.17	.17½	.17	.17½
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis. 210-540-550 flash:				
10 pour test	.28	.30	.28	.30
15 pour test	.27	.27½	.27	.27½
25 pour test	.26	.26½	.26	.26½
35 pour test	.26		.26	

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	July 5		June 28	
124-126 white crude scale	.01⅝	.01¾	.01⅝	.01¾

Export Prices

GASOLINE

GULF COAST—	July 5		June 28	
U. S. Motor	.04½		.04½	
60-62 400	.04⅝		.04⅝	
61-63 390	.04¾		.04¾	
64-66 375	.05		.05	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-62 400 endpoint gasoline	.04¼	.05	.04¼	.05

KEROSENE

GULF COAST—				
41-43 prime white	.04⅜		.04⅜	
41 water white	.04½		.04½	
LOS ANGELES, CALIF.—				
41-43 water white	.04	.05	.03¾	.04¾

LUBRICANTS

NEW YORK (Bayonne, N. J.)—				
600, steam refined cylinder stocks, in bbls.	.22	.22½	.22	.22½
650, steam refined	.24½	.25	.24½	.25
600, Pennsylvania flash	.25½	.26	.25½	.26
630, Pennsylvania flash	.30½	.31	.30½	.31
600, Warren E	.24½	.25	.24½	.25
600, Oil City E	.23½	.24	.23½	.24
Light 140-150 Bright Stocks	.33	.34	.32	.34
Dark 140-150 Bright Stocks	.31	.32	.31	.32

Crude Oil Prices

OKLAHOMA, KANSAS, NORTH AND EAST CENTRAL TEXAS

East Texas (Apr. 1, 1932)† ..... $ .93
East Texas (April 11, 1932)‡ ..... .93
Corsicana heavy* ..... .64
Other fields..... See gravity table

†Posted by Magnolia Petroleum Co., Sinclair Refining Co., Panola Pipe Line Co., Tidal Refining Co. and The Texas Company. ‡Gulf Pipe Line Co. and Atlas Pipe Line Co. *Magnolia Petroleum Co.

EASTERN STATES

Joseph Seep Purchasing Agency
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) (Mar. 14, 1932) $2.02
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.75
Penna Grade Oil in Eureka Pipe Line Lines (West Virginia) (Feb. 26, 1932) 1.70
Penna Grade Oil in Buckeye Pipe Line Lines (Mar. 12, 1932) 1.55
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Apr. 26, 1932) 1.05
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ... .60

Pennsoil Co.
(Effective April 25, 1932)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.97
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.96
Includes Titusville district.
Group C 1.95
Includes Turkey and Tidiout districts.
Group D 1.94
Includes Bear Creek and Porkey districts.
Group E 1.92
Includes Eldenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinsua districts.
Price depends on length of pipe line haul to plant at Oil City.

Tide Water Pipe Co.
(Effective April 25, 1932)

Bradford, Pa. $2.02
Allegany, N. Y. 2.02

Pure Oil Co.
(Effective April 25, 1932)

Cabin Creek, W. Va. $1.70
Bradford Hollow, W. Va. 1.70
Kelly's Creek, W. Va. 1.70

TEXAS PANHANDLE

Gray County, Wheeler County and Carson-Hutchinson Counties....See gravity table

ROCKY MOUNTAIN STATES

Ohio Oil Co.-Midwest Refining Co.

Ilsa, light (Aug. 24, 1931) ..... $ .75
Ilsa, heavy (Aug. 24, 1931) ..... .53
Fort Collins (April 11, 1932) ..... .86
Florence (April 11, 1932) ..... .80
Wellington (April 11, 1932) ..... .76
Greasewood Dome, Colo. (Ap.. 11, 1932) 1.00
Dutton Creek (Apr. 11, 1932) ..... .82
Rock Creek, Wyo. (Apr. 11, 1932) 1.00
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 3, 1931) ..... .51
Salt Creek.....Mid-Continent gravity table
LaBarge.....Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932) ..... .92
Grass Creek (Apr. 11, 1932) 1.20
Elk Basin (Apr. 11, 1932) 1.20
Lance Creek (Apr. 11, 1932) 1.15
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (Apr. 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (Apr. 11, 1932) 1.20
Cat Creek (Apr. 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (Apr. 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) ..... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. (Apr. 1, 1932)* .. .65
Maljamar (Apr. 11, 1932) ..... .60
Artesia-Jackson (Apr. 11, 1932) ..... .65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek light and Elk Basin. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Border and Red Coulee posted by Imperial Refining Co. Lea County posted by Humble Oil & Refining Co. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

*Posted by The Texas Company. Humble Oil & Refining Co. met this price effective April 11.

WEST TEXAS

Iatan and Westbrook..Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos Counties* ..... $ .65
Lea County, N. Mex. (See Rocky Mountain States.)
Toboro, Pecos County (Apr. 11, 1932)†.. .55

*Effective April 1, 1932, Magnolia Petroleum Co., The Texas Company. Effective April 11, Humble Oil & Refining Co. and Gulf Pipe Line Co. and Stanolind Oil & Gas Co. in Winkler County. †Shell Petroleum Corp.

GULF COAST

Grade A and Grade B classifications discontinued by leading buyers.....
.....See gravity table
Jennings, La. (Apr. 11, 1932)*.....$ .75
Lockport, La...See Gulf Coast gravity table
Refugio, light.....See gravity table
Refugio, heavy (Apr. 11, 1932)‡..... .86
Markham (Apr. 11, 1932)§.....
.....See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)†.....
.....See Gulf Coast gravity schedule

*Gulf Refining Co. †Magnolia Petroleum

(Continued on Next Page)

Crude Oil Gravity Table

	1 Kansas and Oklahoma	2 North and Central Texas	3 East Central Texas	4 Gray County, Texas	5 Carson and Hutchinson Counties, Texas	6 Salt Creek and LaBarge, Wyoming	7 North Louisiana and Arkansas	8 Gulf Coast (Texas-Louisiana)	9 Cameron, Meadows, Louisiana	10 Iowa and Lockport, Louisiana
Below 25 degrees	....	....	$.67	....	....	....	$.68	$.80	$.70	$.80
25-25.9 degrees	....	....	.67	....	....	....	.70	.81	.71	.81
26-26.9 degrees	....	....	.67	....	....	....	.72	.82	.72	.82
27-27.9 degrees	....	....	.67	....	....	....	.74	.83	.73	.83
28-28.9 degrees	....	....	.76	....	....	....	.76	.84	.74	.84
Below 29 degrees	$.76	$.76	....	....	....	$.76	....	....	....	....
29-29.9 degrees	.78	.78	.78	....	....	.78	.78	.85	.75	.85
30-30.9 degrees	.80	.80	.80	....	....	.80	.80	.86	.76	.86
31-31.9 degrees	.82	.82	.82	....	....	.82	.82	.87	.77	.87
32-32.9 degrees	.84	.84	.84	....	....	.84	.84	.88	.78	.88
33-33.9 degrees	.86	.86	.86	....	....	.86	.86	.89	.79	.89
34-34.9 degrees	.88	.88	.88	$.76	$.66	.88	.88	.90	.80	.90
35-35.9 degrees	.90	.90	.90	.78	.68	.90	.90	.91	.81	.91
36-36.9 degrees	.92	.92	.92	.80	.70	.92	.92	.92	.82	.92
37-37.9 degrees	.94	.94	.94	.82	.72	.94	.94	.94	.84	.94
38-38.9 degrees	.96	.96	.96	.84	.74	.94	.96	.96	.86	.96
39-39.9 degrees	.98	.98	.98	.86	.76	.94	.98	.98	.88	.98
40 degrees and over.	1.00	1.00	1.00	.88	.78	.94	1.00	1.00	.90	1.00

Note—Magnolia Petroleum Co.'s prices in Oklahoma, North Texas and Central Texas, effective April 1, are the same as above given in Columns 1 and 2, excepting that the schedule begins with below 28 degrees, 67 cents; 28-28.9 degrees, 76 cents. The Empire Pipe Line Co. met the Magnolia prices in Kansas and Oklahoma; the White Eagle Oil Corp. in Kansas and the Pure Oil Co., in Oklahoma.

Column 1—Effective April 1, 1932, Continental Oil Co. in Oklahoma and Kansas; Barnsdall Refineries, Inc., and Standish Oil Co. (Phillips Petroleum Co.), in Oklahoma and Kansas; Skelly Oil Co., Kanotex Refining Co., Derby Oil Co., Vickers Petroleum Co., in Kansas; Magnolia Petroleum Co. and Pure Oil Co., in Oklahoma (see note above); White Eagle Oil Corp., in Kansas (see note above); The Texas Company in Oklahoma. Effective April 11, 1932, Stanolind Crude Oil Purchasing Co. in Oklahoma and Kansas; Gypsy Oil Co., Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co. and Carter Oil Co. in Oklahoma. Carter Oil Co.'s schedule begins at below 25 degrees, 68 cents, with 2 cents added for each degree upward.

Column 2—Continental Oil Co., effective April 1, in North Texas only; followed on same day by The Texas Company in North and Central Texas; Magnolia Petroleum Co. in North and Central Texas (see note above); effective April 11, the Humble Oil & Refining Co., Gulf Pipe Line Co. and Stanolind Crude Oil Purchasing Co.

Column 3—Effective April 1, 1932, the Magnolia Petroleum Co., effective April 11, 1932, Humble Oil & Refining Co.

Column 4—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, the Philtex Oil Co. (Phillips Petroleum Co.), but its schedule was carried down to below 30 degrees at 66 cents, with 2 cents added for each degree upward. Effective April 11, other companies met Continental schedule.

Column 5—Effective April 1, 1932, Magnolia Petroleum Co., effective April 2, Philtex Oil Co., excepting that latter company carried its schedule down to below 30 degrees at 56 cents, with 2 cents added for each degree upward. Effective April 11, Continental Oil Co. and Gulf Pipe Line Co. met Magnolia Petroleum Co. prices.

Column 6—Midwest Refining Co., effective April 11, 1932.

Column 7—The Texas Company, effective April 1, 1932; Magnolia Petroleum Co., effective April 6, 1932; Standard Oil Co. of Louisiana, Louisiana Oil Refining Co., Stanolind Oil & Gas Co. (in Pine Island and Pleasant Hill and in Marion County, Texas) and Gulf Refining Co., effective April 11, 1932.

Column 8—The Texas Company, effective April 1, 1932; Sun Oil Co., April 1, 1932; Humble Oil & Refining Co., effective April 11, 1932; Gulf Pipe Line Co., effective April 11, 1932. Gulf's gravity scale ends with a top of 35 and above at 91 cents.

Column 9—Magnolia Petroleum Co., effective April 6, 1932.

Column 10—Magnolia Petroleum Co., effective April 6, 1932.

(California Crude Oil Prices on Page 31)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

July 5, 1932

STANDARD OIL CO. (INDIANA)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Chicago	17.1	17.1	4.0	10.0
Decatur, Ill.	17.6	17.6	4.0	10.1
E. St. Louis	16 9	16 9	4 0	9.3
Joliet	17 6	17 6	4.0	10.1
Peoria	17 6	17.6	4.0	10.1
Quincy	17.4	17.4	4.0	9.9
Davenport, Ia.	17 7	17.7	4.0	10.4
Des Moines	17.7	17.7	4.0	10.4
Keokuk	17.7	17.7	4.0	10.4
Sioux City	17.3	17.3	4.0	10.0
Duluth, Minn.	18 7	18.7	4.0	11.0
Mankato	18 3	18.3	4.0	9.7
Minneapolis	18 4	18.4	4.0	11.0
LaCrosse, Wis.	19.4	19.4	5.0	11.1
Milwaukee	18 3	18.3	5 0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	13.6	13.6	4.0	10.6
Grand Rapids	17.5	17.5	4.0	10.3
Saginaw	16.6	16.6	4.0	10.6
Evansville, Ind.	18 2	18.2	5.0	9.9
Indianapolis	18.4	18.4	5.0	10.1
South Bend	18.7	18.7	5.0	10.4
Fargo, N. D.	20.1	20.1	4.0	13.0
Huron, S. D.	19.5	19.5	5.0	11.8
Sioux Falls	19.0	19.0	5.0	11.5
K. C., Mo.	17.1	17.1	4.0	8.7
Springfield*	17.1	17.1	4.0	8.0
St. Louis*	16.6	16 6	4.0	9.4
St. Joseph	16.7	16.7	4.0	7.5
Wichita, Kans.	15.9	15.9	4.0	7.0
Bartlesville, Ok.	15.5	15.0	5.0	9.0

*State tax 2 cents, remainder city tax.

A third grade of gasoline, "Stanolind Blue," is sold at all major points at a price 1½ cents or more below the price on the regular grade.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. of 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement; Same amounts as above except made off service station price instead of tank wagon price.

SOUTHWESTERN DISTRICT
Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Dallas, Tex.	16.5	18.0	5.0	10.2
Fort Worth	16.5	18.0	5.0	9.0
Houston	16.5	19.0	5.0	10.2
San Antonio	15.5	18.0	5.0	8.0
El Paso	16 5	19.0	5.0	12.0
Texarkana	*19.5	*19.5	5.0	†11.0
Muskogee, Ok.	15.5	18.0	5.0	9.0
Okla. City	15.5	18.0	5.0	9.0
Tulsa	15.5	18.0	5.0	9.0
Ft. Smith, Ark.	*15.5	*15.5	7.0	†9.0
Little Rock	*18.0	*18.0	7.0	†11.0

One-cent rebate made from posted station prices to cash purchasers in Louisiana, Arkansas and Tennessee.

*Less 2½ cents to dealers. †Less 2 cents to dealers.

SOUTHERN DISTRICT
Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atlanta, Ga.*	23.0	23.0	7.0	11.0
Augusta	23.5	23.5	7.0	14.5
Macon	23.0	23.0	7.0	13.0
Savannah	21.0	21.0	7.0	13.5
Birm'ham, Ala.	22.0	22.0	7.0	11.0
Mobile	21.0	21.0	7.0	10 0
Montgomery	23 5	23.5	7.0	14.5
Jackson, Miss.	21.0	21.0	7.0	12.5
Vicksburg	21.0	21.0	7.0	10.5
Jack'ville, Fla.	20.0	20.0	8.0	12 5
Miami	23.0	23.0	8.0	13.5
Pensacola	23.0	23.0	8.0	13.5
Tampa	22.0	22.0	8 0	11.5
Lexington, Ky.	19 5	19 5	6 0	10.5
Covington	19.0	19.0	6.0	10.5
Louisville	18.0	18.0	6 0	10 5
Paducah	19.5	19.5	6.0	9.0

A third grade "Kyso Green" is sold at a price generally 3 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fourth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax.

Effective April 2 price to dealers 2 cents under posted tank wagon price.

*An additional discount of 1 cent is offered to dealers effective October 6.

ROCKY MOUNTAIN DISTRICT
Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Denver, Colo.	18.0	21.0	5.0	12.5
Pueblo	18.0	21.0	5.0	12.5
Grand Jctn.	20.0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	18.0	21.0	5.0	11.5
Butte, Mont.	20.0	23.0	6.0	17.0
Billings	23.0	26.0	6.0	15.5
Great Falls	23.0	26.0	6.0	17.0
Helena	22.0	25.0	6.0	17.0
Salt Lake, Utah	21.0	24.0	5.0	16.0
Albu'que, N. M.	18.0	21.0	*7.0	14.0
Boise, Idaho	23.5	26.5	6.0	18.0
Twin Falls	23.5	26.5	6.0	18.0

*One-cent city tax.

PENNSYLVANIA-DELAWARE AND PART OF NEW ENGLAND
Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Pittsburgh, Pa.	17.5	18.5	4.0	11.0
Philadelphia	16.5	17.5	4.0	11.0
Scranton	17.5	18.5	4.0	11.0
Allentown	17.5	18.5	4.0	11.0
Altoona	17.5	18.5	4.0	11.0
Erie	17.5	18.5	4.0	11.0
Dover, Del.	17.5	18.5	4.0	11.0
Wilmington	17.5	18.5	4.0	11.0
Springf'd, Mass.	17.5	18.5	4.0	8.0
Worcester	17 3	18.3	4.0	8.0
Boston	16.5	17.5	4 0	8.0
Providence, R.I.	14.5	15.5	3.0	9.0
Hartford, Conn.	16.5	17 5	3.0	8.0
New Haven	16.6	17.6	3.0	8.0

STANOLIND FURNACE OIL IN CHICAGO

Effective July 1, prices f.o.b. Chicago, tank wagon prices: 1 to 99 gallons, 3 cents; 100 gallons or more, 6 cents.

Stanolax Fuel

Effective May 9, f.o.b. Chicago, tank wagon prices: 1 to 199 gallons, 7 cents; 200 gallons or more, 5 cents. Sinclair met this by bringing down the price of its No. 3.

Fuel Oils

Chicago tank wagon prices (in lots of 400 gallons and over): 38-40 straw distillate, 6 cents; 32-36 gas oil (light zero), 5.5 cents; 32-36 gas oil (industrial), 5.25 cents; 28-30 zero fuel oil, 5 cents; 24-26 fuel oil, 4.25 cents; 18-23 fuel oil, 3.75 cents.

CENTRAL SOUTH DISTRICT
Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
N. Orleans, La.	21.0	21.0	*7.0	†12.0
Baton Rouge	20.0	20 0	6.0	10.0
Alexandria	21.0	21.0	*7.0	10.0
Lafayette	21.0	21.0	*7.0	†10.0
Lake Charles	21.0	21.0	*7.0	†12.0
Shreveport	20.0	20.0	6.0	†12.0
Knoxville, Tenn.	24.0	24 0	8 0	13.5
Memphis	22.5	22 5	8.0	11.0
Chattanooga	24.0	24 0	8.0	13.5
Nashville	23.5	23.5	8.0	13.5
Bristol	22 5	22.5	8.0	14.0
Lt. Rock, Ark.	19.0	19.0	7.0	11.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

†Kerosene prices in Louisiana include 1-cent tax except New Orleans where tax is 2 cents.

Two-cent discount off gasoline and kerosene tank wagon price to dealer and commercial accounts.

NEBRASKA
Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Omaha	16.9	17.9	5.0	10.25
McCook	19.0	19.0	5.0	11.75
Norfolk	18.75	18.75	5.0	10.75
N. Platte	19.0	19.0	5.0	11.5
Scottsbluff	19.0	19.0	5.0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

OHIO
Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Ohio points	18.0	18.5	5.0	*12.0

Dealers and commercial accounts 2 cents under tank wagon.

*Service station price 13 cents.

PACIFIC COAST TERRITORY
Standard Oil Co. of California*

	Gasoline			Kero.
	Tank truck†	Posted retail	Incl'ds tax of	tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4.0	15.5
Reno, Nev.	25.0	24.0	5.0	19.0
Portland, Ore.	21.0	20.0	5.0	16.5
Seattle, Wash.	22 0	21.0	6.0	16.5
Tacoma	22 0	21 0	6.0	16.5
Spokane	25.5	24.5	6 0	20.5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

*Retail prices posted by Standard Stations, Inc., a subsidiary.

NAPHTHA

	Tank wagon	Tank car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

ATLANTIC COAST DISTRICT
Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Atl'tic City, N.J.	16.9	17.9	4.0	11.2
Newark	16 2	17.2	4.0	8.5
Annapolis, Md.	18.5	19.5	5 0	10.0
Baltimore	17.9	18 9	5.0	7.0
Cumberland	19 4	20.4	5.0	11.7
Wash'g'n, D. C.	16.4	17 4	3.0	10.0
Danville, Va.	20.6	21 6	6 0	11.9
Norfolk	19.0	20 0	6 0	10.3
Petersburg	20.1	21.1	6.0	11.4
Richmond	19 4	20.4	6.0	10.7
Roanoke	20 6	21.6	6.0	11.9
Charles'n, W.Va.	19.3	20.3	5 0	11.5
Parkersburg	17.9	18.9	5.0	10.2
Wheeling	18 9	19.9	5.0	11.2
Charlotte, N. C.	22.2	23.2	7.0	12.5
Hickory	22.4	23.4	7.0	12.7
Mt. Airy	22 5	23.5	7.0	12.8
Raleigh	22 0	23.0	7.0	12.3
Salisbury	22.3	23.3	7.0	12.6
Charleston, S.C.	20.0	21.0	7.0	10.3
Columbia	21.9	22.9	7.0	12.2
Spartanburg	22.2	23.2	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and States of Maryland and New Jersey, where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Prices shown above are for standard gasoline.

NEW YORK AND PART OF NEW ENGLAND DISTRICT
Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax of	tank wagon
Albany, N. Y.	16 5	17 5	4 0	10.0
New York*	13 5	13.5	4.0	9.5
Buffalo	17 5	18.5	4.0	9.0
Rochester	17.5	18.5	4 0	9.0
Syracuse	18.5	19.5	4.0	9.5
Boston, Mass.	16 0	17 0	4.0	9.0
Augusta, Me.	18.5	19.5	5.0	9.5
Manch'tr, N. H.	18.0	19.0	5.0	9.0
Burlington, Vt.	19.0	20.0	5.0	10.0

*Prices in steel barrels.

TANK WAGON CHANGES

Standard Oil Co. of Kentucky made changes of varying amounts in the gasoline tank wagon and station prices throughout its territory on June 25 as shown in the accompanying table. The general change represented an increase of 1 cent each. On June 16 the gasoline tank wagon and station prices had been reduced to 19 cents each in Mobile, Ala., due to withdrawal of the 1½-cent county tax on that date. On June 21 the kerosene price was advanced to 9½ cents in Paducah, Ky.

Atlantic Refining Co. advanced the gasoline tank wagon and station prices one-half cent in Pennsylvania and Delaware June 27.

Standard Oil Co. of Louisiana reduced the gasoline tank wagon 2 cents in Little Rock, Ark., on June 16 to 11 cents net. Then on June 18 the price was advanced 1 cent, making the price since then to date 12 cents net and 19 cents including taxes.

Standard Oil Co. of Ohio advanced the gasoline state-wide gasoline tank wagon and station prices one-half cent on July 1.

Standard Oil Co. of California reduced the gasoline retail price to 18 cents on

(Continued on Page 32)

Crude Oil Prices

(Continued from Preceding Page)

Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

NORTH LOUISIANA AND ARKANSAS

Smackover, Ark. (all grades)	$ .65
Urania, La. (Apr. 12, 1932)	.64
East El Dorado, Ark. (Apr. 6, 1932)	.65
Stephens, Ark., below 29° (Apr. 12, 1932)	.61
Stephens, Ark., 29° and above (Apr. 12, 1932)	.64
Other fields	See gravity table

Note—Smackover, all grades, The Texas Company, April 1, 1932; Magnolia Petroleum Co., April 6, 1932; Standard Oil Co. of Louisiana, Gulf Refining Co. and Louisiana Oil Refining Co., April 11, 1932. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.; East El Dorado by Magnolia Petroleum Co., effective April 6, 1932; by Gulf Refining Co., effective April 11, 1932; Stephens, Ark., by Louisiana Oil Refining Co. and Atlantic Oil Producing Co.

SOUTH CENTRAL AND SOUTHWEST TEXAS

Darst Creek (Apr. 1, 1932)*	$ .75
Luling (Apr. 1, 1932)*	.84
Mirando (Apr. 1, 1932)*	.90
Pettus (Apr. 11, 1932)‡	1.00
Salt Flat (Apr. 11, 1932)‡	.75
Thrall§	
Lytton Springs (Lockhart) (Apr. 1, 1932)*	.94
Dobrowolski¶	
Same as Mid-Continent gravity scale up to and including 38-38.9°	
Somerset†	
Same as Mid-Continent gravity scale up to and including 38-38.9°	

*Magnolia Petroleum Co., The Texas Company, Humble Oil & Refining Co. posted 30 cents for Mirando, April 11. §Thrall prices same as North Central Texas less 19½ cents per cwt. freight. ¶Grayburg Oil & Refining Co., Pioneer Oil & Refining Co. and Texas Petroleum Products. ‖Pioneer Oil & Refining Co. ‡Humble Oil & Refining Co.

MIDDLE WESTERN STATES
Ohio Oil Co.
(Effective April 11, 1932)

Lima	$1.15
Wooster	1.25
Illinois	1.10
Indiana	.75
Princeton	1.10
Plymouth	Shut in
Western Kentucky	1.05
Midland, Mich. (May 17, 1932)*	.45
Muskegon†	.95
Muskegon‡	.85
Somerset, Ky. (Apr. 25, 1932)	.85
Hart County, Ky. (June 10, 1932)§	1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph-Sal Refining Co. ‡Old Dutch Refining Co. §Posted by Stoll Refining Co, Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

MEXICO

Panuco*	$ .67

*F.o.b. ship, based on May transactions and exclusive of production and export taxes and bar dues.

CANADA

Ontario (Nov. 3, 1931):	
Petrolia*	$1.90
Oil Springs*	1.97
Alberta (Apr. 22, 1932):	
Turner Valley†:	
Crude oil 40-44.9	1.56
Crude oil 45-45.9	2.18
Crude oil 50 and above	2.50
Crude naphtha	3.33
Discolored naphtha	2.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

NEWS FOR SALES DEPARTMENTS

Refiners Manifest Interest in Blend Of Coal and Oils

NEW YORK, July 2.—Widespread interest is shown in bunker fuel consuming circles here in the success of the new combination coal-oil fuel experiments carried on during the recent voyage here of the Cunarder Scythia, as reported to the home office of the Cunard Line in London. Shipping interests say that if the fuel proves practicable it may revolutionize steamship operation, particularly in England, where the coal industry has suffered seriously by the general adoption of fuel oil by practically all British passenger vessels. The new mixture is reported to be 15 to 20 per cent cheaper than ordinary bunker "C" fuel oil.

The exact nature of the new fuel, which is composed roughly of 40 per cent pulverized coal and 60 per cent fuel oil, has been kept a secret. It was developed by engineers of the Cunard Line, and during the Scythia's recent voyage to New York it was found that the mixture handled very satisfactorily. The Scythia is now on the return voyage to Liverpool, with further tests being conducted.

The new mixture, it is stated in shipping circles, can be handled as readily as ordinary fuel oil and can be bunkered and passed through the feed pipes as if it were regular fuel oil. An observation of the flames in the furnaces of the Scythia's boilers, it was stated, showed little difference from the flame produced by regular fuel oil.

Engineers of the Todd Shipyards Corp., in collaboration with the Shipping Board, some years ago conducted extensive experiments with pulverized coal and developed a number of different systems which proved practicable on Shipping Board vessels. The research staff of the Todd Shipyards, it is reported, has also been conducting experiments with a mixture of pulverized coal and fuel oil.

SHIPMENTS TO UNITED KINGDOM SHOW GAINS

NEW YORK, July 2.—Imports of petroleum into the United Kingdom during May, according to Board of Trade statistics, aggregated 194,208,574 gallons, valued at £2,513,311, against 182,856,442 gallons, valued at £2,421,205, in May last year. Details follow:

	Gallons	
	May, 1932	May, 1931
Gasoline	89,077,618	79,025,819
Kerosene	10,250,317	16,342,457
Lub oil	9,454,659	9,366,958
Gas oil	6,593,430	5,539,121
Fuel oil	43,925,353	47,463,303
Crude oil	34,086,562	24,031,962
Miscellaneous	820,635	1,085,822

Total imports of crude and refined petroleum into the United Kingdom during the first five months of 1932 were 927,391,318 gallons, against 953,396,303 gallons in the corresponding months last year. The imports during January-May this year were valued at £13,052,641, against £20,757,802 in the first five months of 1932. There was a sharp drop in crude oil imports this year, imports during the first five months being 140,098,484 gallons, against 173,644,625 gallons during the comparable months of 1931.

JOINS OHIO MARKETERS

Robert A. Warfel has been named secretary of the Ohio marketers association to succeed W. A. Milne, who has been in ill health for more than a year. Mr. Milne held the office for five years. In assuming the new duties on July 1 Mr. Warfel returns to Columbus after spending several years in advertising and publicity work in New York and Chicago.

Government Report Covers Wages and Hours of Labor at Oil Stations

Filling-station employes earned an average of 39.3 cents per hour and $23.39 in a representative week during the months of April to July in 1931, as shown by a study made by the Bureau of Labor Statistics covering 2,960 employes of 736 filling stations in 43 representative cities.[1] These employes worked, on an average, 6.5 days during the week (counting as a day each whole or part day worked). The full-time hours per week for the employes covered in the study averaged 60, while the time actually worked averaged 59.5 hours, or 99.2 per cent of full time. At full time, the weekly earnings averaged $23.58.

These data are shown in Table 1, as are also averages for eight of the most important occupations in the industry and for a group, designated as "other employes," including the employes in occupations in which the number of employes was too small to warrant separate occupational tabulation. The averages in this and other tables in this report are for males only; but eight females were employed at the 736 stations included in the study. There were 198 negroes, employed mostly by stations in cities in southern states and working principally as car washers, greasers, or tire men. Operators and operators' helpers were the most important occupations, in point of numbers employed, forming approximately 75 per cent of the total number of employes.

The fewest days (5.3) in one week were worked by relief men, and the largest number of days (6.9) by porters.

Average full-time hours per week in the various occupations ranged from 48.3 for relief men to 67.9 for tire men, while hours actually worked ranged from 46.6 for relief men to 67.8 for tire men.

The figures in the column headed "Per cent of full time worked in week" show that car washers worked a smaller per cent of average full-time hours per week (92.5) than the employes in any other occupation in the table. Average hours in excess of full time are shown for porters and for operators. Although some employes in these occupations worked only part time, others worked overtime, and the overtime more than counterbalanced the time lost.

The average earnings per hour ranged from 19.3 cents for porters to 63.1 cents for managers; full-time earnings per week ranged from $12.56 for porters to $36.16 for managers; and actual earnings in one week ranged from $12.65 for porters to $36.09 for managers.

In addition to earnings at regular basic wage rates, employes at a few stations had other earnings or income, or were given certain advantages or privileges, but data as to the amounts involved were not of record. These amounts, however, were probably small and so would not have affected the averages materially. It was reported at one station that extra money was received for tire-patching jobs. Employes of another station could have three meals a day without expense to them at a hotel owned by the employing company. The operator at a third station obtained his living quarters at the nominal rental of $10 per month. At other stations employes could buy gasoline and oil for their own use at a discount.

The study included filling-station employes in 2 cities in each of 8 states and in 1 city in each of 28 states and in the District of Columbia. In 1 city data were obtained for 9 filling stations; in each of 4 cities, 14 stations; in each of 2 cities, 15 stations; in each of 11 cities, 16 stations; in 1 city, 17 stations; in each of 16 cities, 18 stations; and in each of 8 cities, 20 stations. A greater number of stations and employes were covered in large than in small cities.

Data were obtained as to the individual hours of labor and earnings of employes for a representative pay-roll period (one week, nine days, a half month, or one month) during April, May, June, or July, 1931; the average hours and earnings, therefore, are as of those months. The wage figures for the stations with a pay period of more than one week were recomputed so that averages for all employes covered in the study could be shown on a uniform basis of one week.

The principal business of a filling station is the selling of gasoline and lubricating oil. Tire service, the washing and greasing of cars, the sale of accessories and supplies, and the minor adjustment or repair of cars are generally incidental. In selecting stations for inclusion in the report, the effort was made to include only typical filling stations in each city. Some of the 736 stations included were privately owned and operated; some belonged to small companies with a group of stations in one city; and others were those of large refining companies operating stations in practically all the large cities in the United States. In this report the stations of 239 different companies are represented.

[1]More detailed information will be published later in bulletin form.

TABLE 1—AVERAGE HOURS AND EARNINGS OF FILLING-STATION EMPLOYES IN 1931, BY OCCUPATION

Occupation—	Number of stations	Number of employes	Average number of days worked in 1 week	Average full-time hours per week	Average number	Hours actually worked in 1 week: Per cent of full time	Average earnings per hour	Average full-time earnings per week	Average actual earnings in 1 week
Car washers	84	151	6.5	66.9	61.9	92.5	$0.248	$16.59	$15.36
Greasers	164	280	6.4	59.9	59.6	99.5	.393	23.54	23.41
Managers	60	68	6.4	57.3	57.2	99.8	.631	36.16	36.09
Operators	683	1,182	6.6	61.0	61.3	100.5	.441	26.90	27.01
Operators' helpers	475	1,039	6.4	57.7	57.2	99.1	.362	20.89	20.71
Porters	55	72	6.9	65.1	65.7	100.9	.193	12.56	12.65
Relief men	51	52	5.3	48.3	46.6	96.5	.409	19.75	19.07
Tire men	35	56	6.6	67.9	67.8	99.9	.300	20.37	20.36
Other employes	28	60	6.4	60.0	58.5	97.5	.404	24.24	23.65
Total	736	2,960	6.5	60.0	59.5	99.2	$0.393	$23.58	$23.39

REPORT INTERSTATE SHIPMENTS

WASHINGTON, D. C., July 5.—A bill to require consignors of liquid fuels to report monthly to the government on consignments across state lines has been passed by the Senate and sent to the House.

Senator Reed (R., Pa.), said the bill was designed to make it possible to impose taxes on so-called "bootleg gasoline."

Gasoline Tax Data Show 2.75 Per Cent Decline in Demand

The percentage decline in gasoline consumption for April compared to April, 1931, was the same as for the four-month periods ending April 30, according to data compiled by the American Petroleum Institute based on state gasoline tax reports. The tax reports for the 48 states and the District of Columbia indicate a gallonage of 1,303,947,000 gallons for April, 1932, which was 2½ per cent less than the gallonage for April, 1931.

The total indicated gallonage for the first four months of 1932 was 4,617,931,000 gallons, which also was 2.75 per cent less than the 4,709,536,000 gallons for the first four months of 1931. The American Petroleum Institute in its report of individual states points out that the data do not as accurately reflect consumption as the Bureau of Mines reports based on refinery operations. Regarding this situation the Institute's report states:

"While it is felt that the figures herewith are fairly comparable, it must be borne in mind that more or less widespread tax evasion and changes in the basic laws under which the figures were collected over the period compared, may have disturbed the comparability of the figures. It is, therefore, not correct to base percentage changes in demand upon the figures presented herewith. All demand calculations used by the American Petroleum Institute are based upon the Bureau of Mines' monthly statistics, which we regard as being more truly indicative of actual consumption."

GASOLINE CONSUMPTION BY STATES, APRIL, 1932

	Month of— April, 1932 (gallons)	April, 1931 (gallons)
Alabama	12,265,000	13,949,000
Arizona	6,121,000	6,644,000
Arkansas	9,053,000	9,939,000
California	117,074,000	118,205,000
Colorado	14,226,000	15,124,000
Connecticut	19,430,000	19,487,000
Delaware	2,992,000	1,617,000
District of Columbia	8,914,000	7,881,000
Florida	18,697,000	20,226,000
Georgia	16,643,000	17,939,000
Idaho	4,116,000	4,935,000
Illinois	82,129,000	82,405,000
Indiana	39,604,000	42,176,000
Iowa	37,041,000	32,908,000
Kansas	25,366,000	†24,327,000
Kentucky	13,148,000	14,202,000
Louisiana	13,778,000	15,620,000
Maine	6,851,000	7,716,000
Maryland	16,004,000	15,771,000
Massachusetts	4,872,00	48,045,000
Michigan	64,371,000	70,026,000
Minnesota	34,959,000	36,323,000
Mississippi	*8,797,999	9,915,000
Missouri	38,026,000	42,858,000
Montana	7,433,000	8,276,000
Nebraska	19,839,000	17,284,000
Nevada	1,964,000	1,969,000
New Hampshire	4,416,000	4,558,000
New Jersey	57,204,000	59,047,000
New Mexico	3,798,000	4,341,000
New York	123,769,000	129,047,000
North Carolina	18,654,000	18,491,000
North Dakota	13,190,000	13,978,000
Ohio	80,630,000	82,462,000
Oklahoma	22,392,000	22,047,000
Oregon	12,017,000	15,082,000
Pennsylvania	83,327,000	66,751,000
Rhode Island	8,064,000	7,273,000
South Carolina	8,968,000	10,158,000
South Dakota	13,161,000	12,669,000
Tennessee	15,099,000	17,068,000
Texas	61,259,000	66,550,000
Utah	4,865,000	5,598,000
Vermont	2,864,000	3,347,000
Virginia	18,822,000	19,531,000
Washington	20,293,000	29,202,000
West Virginia	10,642,000	11,165,000
Wisconsin	34,032,000	32,778,000
Wyoming	2,768,000	3,040,000
Total	1,303,947,000	1,340,850,000
Daily average	43,465,000	44,695,000
Change from previous year:		
Total decrease	36,903,000	.....
Percentage decrease in daily average	—2.75%	.....

*Estimated. †Revised.

NEWS FOR PETROLEUM REFINERS

TO CONTINUE GRAYBURG OPERATION UNTIL MAY

SAN ANTONIO, Tex., July 2.—The local refinery of the Grayburg Oil Co., which was to have been shut down next month probably will continue operation until next spring. The Grayburg refinery, which is located in one of the residential sections, has been a bone of contention among city officials and residents for several years. Suits were brought to secure the removal of the plant and last year an agreement was finally reached between residents and company officials that the plant would be shut down and removed to another location by August of this year.

An agreement is now being worked out with residents and city officials which will permit the plant to continue operation at its present location until May, 1933, at which time the company will not ask for another extension and will beautify the plant site.

Frank Hovell, plant superintendent, and Charles Barsum, assistant sales manager for the company, explained to the city commission this week that 250 employes would be thrown out of work if the plant was removed by August 15 and that current financial conditions make it impossible to remove the plant prior to May 1, 1933. The plant is 75 per cent deteriorated and under ordinary conditions would be forced to close by May of next year, it was explained.

STILL OPERATES ONE YEAR CONTINUOUSLY

NEW YORK, July 5.—Employes of the refinery stills at the Bayonne plant of the Tide Water Oil Co. are receiving the congratulations of the refinery officials on three long runs just completed by three stills. These units are crude unit No. 4, crude unit No. 3, and still No. 63 of crude unit No. 1.

Due to a leaky tube in the convection section of the furnace, it was found necessary a short time ago to take crude unit No. 4 out of service to permit necessary repairs, after the unit had operated continuously from April 2 to June 14 and had completed a run of 74 days. This mark surpassed a previous long run of 63 days which ended earlier in the year.

Not to be outdone by its neighboring unit, crude unit No. 3 on March 13 set out to beat the earlier mark of crude unit No. 4, and on June 6, when it became necessary to take the former unit out of service, it had amassed a total of 86 days of continuous operation.

The palm for continuous operation at the Tide Water plant, however, goes to still No. 63, one of the stills in crude unit No. 1, battery A, of the Bayonne plant. This still has been in operation since June 26, 1931, and has completed one year of continuous operation.

SHELL DISTRIBUTING PLANT

CHATHAM, Ontario, July 2.—In pursuance of its policy of extending its marketing facilities to Ontario Great Lake ports, Shell Oil Co. of Canada has purchased a 3-acre site at Port Stanley, Ontario, and will establish a marine storage plant of between 4,500,000 and 5,000,000 gallons capacity. The plant will have waterfront facilities and pumping equipment will be installed to handle gasoline and other petroleum products from the company's tankers, Port Stanley being made distributing center for adjacent areas in western Ontario. The plant will be supplied from the company's projected new refinery at Montreal East.

Decrease in Value of Imports During May Larger Than Decline in Exports

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 2.—The percentage of decrease in the value of petroleum and products imported in May compared with the same month of 1931 was much greater than the decrease in the value of exports of these products covering the same periods.

The value of imports of petroleum and products in May, 1931, was $8,283,254, decreasing to $6,643,514 in May, 1932, while the value of exports of the same products in May, 1931, was $26,728,539, decreasing to $23,236,777 in May, 1932.

For the first five months of 1931 the value of imports of petroleum and products was $46,042,473, decreasing to $37,673,334 in the first five months of 1932.

The exports of these products in the first five months of 1931 was $126,262,337, decreasing to $96,040,000 in the same period of 1932.

Crude Oil Imports

Crude oil imported in May, 1931, totaled $4,512,194 bbls. valued at $3,859,857, increasing to 5,088,738 bbls. valued at $3,398,981 in May, 1932, the greatly lowered price per barrel for imports of this year being shown by these figures.

In the first five months of 1931 imports of crude totaled 21,530,785 bbls., increasing to 24,390,354 bbls. in the same period of this year.

Exports of crude increased from 2,267,666 bbls., valued at $1,871,386 in May, 1931, to 2,942,564 bbls., valued at $2,887,287 in May of this year, and for the first five months' periods these exports increased from 9,308,274 bbls. in 1931 to 11,385,410 bbls. in 1932.

Refined oils imported in May, 1931, amounted to 2,841,972 bbls. with a small increase to 2,884,600 bbls. in May, 1932. During the five months' periods there was an increase from 16,845,229 bbls. in 1931 to 18,734,287 bbls. in 1932.

Exports of refined oils decreased from 8,960,438 bbls. in May, 1931, to 8,223,399 bbls. in the same month of the current year, and in the five months' periods decreased from 39,663,601 bbls. to 33,697,759 bbls.

Gasoline, naphtha and other finished light products imported in May, 1931, totaled 1,049,588 bbls., valued at $3,111,265, increasing to 1,176,825 bbls. valued at $2,281,855 in May, 1932, these figures giving evidence of the low price at which gasoline has been imported during the present year. For the five months' periods there was an increase in such imports from 6,068,291 bbls., valued at $17,142,453 in 1931 to 6,498,137 bbls., valued at $13,519,574, illustrating the great decline in the value of this gasoline per barrel, while the quantity imported increased.

The exports of gasoline showed an opposite trend in quantities decreasing from 4,792,073 bbls., valued at $12,539,634 in May, 1931, to 4,417,504 bbls., valued at $9,893,966 in May, 1932. During the five months' periods the decrease in these gasoline exports was from 19,828,587 bbls. in 1931 to 17,124,892 bbls. in 1932.

Illuminating oil exports decreased from 1,144,874 bbls. in May, 1931, to 857,633 bbls. in May of this year.

Gas oil and distilled fuel oil exported in May, 1931, amounted to 2,287,041 bbls. decreasing to 774,858 bbls. in May of this year.

Fuel or bunker oil for vessels in foreign trade (not included in domestic exports) in May, 1931, amounted to 4,285,746 bbls., decreasing to 3,241,464 bbls. in May, 1932.

Lubricating oil exports increased from 727,393 bbls., valued at $5,353,745 in May, 1931, to 815,583 bbls., valued at $5,391,441, which indicates the lower price at which this lubricating oil was sold in May of the current year.

Changes in Design to Aid Performance Of Antiknock Gasolines in Motors

Complete reversal of the present concept of engine design will give the 12-cylinder automobile of tomorrow the power of today's 16, according to a report of experiments conducted in the engineering laboratory of the Ethyl Gasoline Corp., Detroit, under C. D. Hawley, assistant director.

The 33 per cent increase in power, Mr. Hawley declares, will be produced by improvement in what is now regarded as a necessary evil—the cooling system.

Today, Mr. Hawley points out, the engine is built first, and the cooling system installed in the space left. In the future, the process will be literally reversed, he predicts, the most effective amount of cooling space being estimated first, and the engine built in whatever space remains.

"Tests made to learn the value of greater cooling capacity than is built into present cars," Mr. Hawley reports, "have shown that increases in power heretofore expected from larger engines can be more efficiently realized from changes in design to provide better cooling of cylinders and engine parts. These tests have shown that as much as a third more power can be got under test conditions from a modern high compression engine by merely improving its cooling system.

"To utilize fully these developments in cooling, tomorrow's automobiles may be designed with large and efficient cooling systems first, using the remaining space under the hood for the actual engine instead of the reverse, as at present.

"The cooling system has in the past been considered a necessary evil, but these tests indicate that it may be as important as cylinder size in determining the power output of modern automotive engines.

"Certainly, large cooling spaces in the actual cylinder blocks, even if this requires a reduction in cylinder size, will pay in the ultimate efficiency of the machine."

The tendency up to now, Mr. Hawley says, has been to increase continually the size and weight of the engine to secure more power, and since the hood space has been limited by considerations of symmetry of the finished car, the cooling system has been reduced to make room for the expanding engine.

Multiplication of Cylinders

Multiplication of cylinders, and increase in diameter of cylinders and pistons has gone so far, however, Mr. Hawley believes, that further advance in this direction seems unlikely.

"Increases in engine size," he says, "add to the weight of the car at the same time that they increase its power, and this greater weight materially reduces the ability of the car to make a quick getaway in traffic. Exhaustive tests indicate that acceleration from a standing start is more important in fast automobile travel than top speed on the stretch. To permit maximum acceleration, the power output of the motor must be increased with a minimum additional weight.

"More power without added weight is being secured by the use of high compression engines designed to use antiknock fuels, but other developments must accompany this if full efficiency in this respect is to be realized.

"Smaller engines with larger cooling systems and radiators will yield increased power without adding to the car's weight.

"Cooling of valves and valve seats and even special cooling of the moving pistons themselves yields greater power than the best present high compression engines, and at the same time increases the life of engine parts. Valves, whose failures are often unjustly blamed on every possible cause, can be made to last several times as long if proper precautions are taken to keep them and their seats cool."

Adoption of the new concept will require time, Mr. Hawley thinks, new and fundamental ideas of design being introduced slowly into an industry as large as the automobile trade.

"Nevertheless," he asserts, "cars in the near future will have to adopt such changes to keep up with competition."

ACQUIRE SECOND SITE FOR PLANT IN FRANCE

NEW YORK, July 2.—Compagnie Francaise des Petroles has acquired land at Martigues in the south of France and has started preliminary construction work for a new refinery at that point, according to the company's annual report. Definite plans as to capacity and type of equipment to be installed at the new refinery are being held in abeyance, pending completion of the company's refinery in the north of France.

The northern refinery of C.F.P., located on the Tancarville Canal, near Havre, is being built by Compagnie Francaise de Raffinage, C.F.P.'s refining subsidiary. This refinery, it is expected, will be finished and in operation by the spring of 1933.

Under the terms of the French petroleum law, C.F.P., in which the French government has a 35 per cent stock interest, is allotted the right to refine a quantity of crude corresponding to 25 per cent of France's total refined products requirements.

MOUTRAY OPERATES PLANT

The Moutray Oil Co., with headquarters at Abilene, Tex., is operating a 600-bbl. skimming plant at Hawley, Tex. The products of the plant are sold locally.

E. W. Moutray is president of the company, C. B. Snyder vice president and M. P. Moutray secretary and treasurer. Waldo W. Moutray is in charge of the refinery at Hawley and J. P. Bohannon is sales manager.

NATURAL GASOLINE MANUFACTURE

California Stocks Natural Gasoline Decreased in May

Natural gasoline production in California decreased slightly in May amounting to 36,602 bbls. as compared to 37,248 bbls. daily in April. Refinery utilization increased from 25,643 bbls. to 26,194 bbls. daily and shipments increased from 3,644 bbls. to 6,351 bbls. daily, so that stocks were reduced 1,543 bbls. daily or a total of 47,845 bbls. Stocks at the end of May amounted to 2,874,685 bbls.

CALIFORNIA NATURAL GASOLINE STATISTICS FOR APRIL AND MAY

(Daily average in barrels)

	May	April
Total production	37,010	37,559
Stock trans. (deliv.) receipt—net	(490)	29
Total	36,520	37,588
Deduct refinery requirements:		
Run to stills	3,603	4,251
Blended	22,591	21,392
Total	26,194	25,643
Gains (losses) unaccounted for—net	(5,115)	1,000
Net supply available to market	5,211	12,945
Demand:		
Domestic consumption inc. bunkers	403	422
Off shore shipments:		
Alaska and Hawaii	.....	9
Pacific foreign exports	1,584	419
Atlantic foreign exports	2,439	3,214
Intercoastal shipments	2,328	.....
Rail and truck shipts. to U. S. points outside Pac. Coast Terr.	.....	2
Total market demand	6,754	4,066
Surplus or (deficit)	(1,543)	8,879
Stocks—last day of period:		
Total stocks	2,874,685	2,923,323
Outside U. S. (inc. Alaska, Hawaii and Canal Zone)	.....	677
Inside United States:		
Outside Pac. Coast Terr.	.....	116
Inside Pac. Coast Terr.	.....	.....
At refineries	2,260,746	2,222,820
Elsewhere	613,939	699,710
Inside Pac. Coast Terr.—last day	2,874,685	2,922,530
Inside Pac. Coast Terr.—first day	2,922,530	2,656,149
Increase or (decrease) during the period	(47,845)	266,381

OPERATING DATA FOR MAY

Number of plants operating	112
Daily capacity in thousand feet	3,664,101

PRODUCTION BY FIELDS

	Gas treated (1,000 cu. ft.)	Natural gasoline produced (gallons)
Fullerton and Whittier	571,624	1,398,257
Midway	1,825,133	3,142,324
Huntington Beach	472,025	1,696,630
Kettleman Hills	7,551,826	11,282,632
Long Beach	4,047,734	9,533,013
Richfield	397,826	503,372
Santa Fe Springs	5,751,095	8,635,965
Seal Beach	510,734	1,005,158
Ventura Avenue	3,060,145	3,123,708
All other fields	4,681,674	7,284,850
Total	28,869,871	47,655,909

PRODUCTION BY METHODS

Type of plant—	Gas treated (M.C.F.)	Natural gasoline produced (gallons)	Gasoline recovery per M.C.F. treated
Oil absorp.	28,700,799	47,481,443	1.654
Compressor	169,072	174,466	1.032
Total	28,869,871	47,655,909	1.651
			Bbls.
Finished gasoline produced at plants			173

STOCKS OF NATURAL GASOLINE

Natural gasoline held by plant operators.	4,705,372	112,033
Natural gasoline held by refineries	116,031,384	2,762,652
Total	120,736,756	2,874,685

LIQUEFIED GAS—BARRELS DAILY AV.

	May	April
Production	408	311
Sales	408	327

"Temperature of Molecular Instability" Used as Aid in Research Problems

By C. R. BURKE and W. A. MELTON

Today natural gasoline manufacturers desire to produce a gasoline of equal value to refinery gasoline, utilizing for the purpose as much butane as possible. The refiners, on the other hand, wish to manufacture a gasoline having the desirable qualities of stabilized natural gasoline coupled with the best qualities of their own.

In this table is shown the molecular weight, specific gravity, boiling points at atmospheric pressure, temperatures of molecular instability, pressures and pounds per square inch at temperatures of molecular instability, compiled, it is stated, by various authors as Engler and Hoefer, Beilstein, Redwood and others.

While in the table the temperature of

PHYSICAL CONSTANTS OF PURE HYDROCARBONS

Name of hydrocarbon and frac. cut:	Chemical symbol	Molecular weights	Specific gravity	Boiling points, °F.	Temp. of mol. instability, °F.	Creative pressure of temp. of molec. instability, lbs. per sq. in.
Gasoline hydrocarbons—						
Pentane	C_5H_{12}	72	0.6355	96.8	755	5,820
Hexane	C_6H_{14}	86	0.6494	157	732	3,180
Heptane	C_7H_{16}	100	0.6619	209	715	1,765
Octane	C_8H_{18}	114	0.6740	258	695	1,065
Nonane	C_9H_{20}	128	0.6838	302	680	590
Decane	$C_{10}H_{22}$	142	0.6943	342	662	320
Undecane	$C_{11}H_{24}$	156	0.6939	381	643	216
Kerosene hydrocarbons—						
Dodecane	$C_{12}H_{26}$	170	0.7025	418	628	120
Tridecane	$C_{13}H_{28}$	184	0.7114	453	591	52
Tetradecane	$C_{14}H_{30}$	198	0.7187	486	565	21
Pentadecane	$C_{15}H_{32}$	212	0.7252	518	545	14.7
Hexadecane	$C_{16}H_{34}$	226	0.7319	549	515	....
Gas-oil hydrocarbons—						
Heptadecane	$C_{17}H_{36}$	240	0.7369	578	496	....
Octadecane	$C_{18}H_{38}$	254	0.7425	607	475	....
Nonadecane	$C_{19}H_{40}$	268	0.7466	635	456	....
Eicosane	$C_{20}H_{42}$	282	0.7507	662	437	....
Meneicosane	$C_{21}H_{44}$	296	0.7534	688	419	....
Fuel oil hydrocarbons—						
Docosane	$C_{22}H_{46}$	310	0.7553	*714	404	....
Tricosane	$C_{23}H_{48}$	324	0.7571	*739	391	....
Tetracosane	$C_{24}H_{50}$	338	0.7583	*763	383	....
Pentacosane	$C_{25}H_{52}$	352	0.7597	*788	375	....
Hexacosane	$C_{26}H_{54}$	366	0.7687	*814	368	....
Heptacosane	$C_{27}H_{56}$	380	0.7789	*838	359	....
Octacosane	$C_{28}H_{58}$	394	0.7792	*860	352	....
Nonacosane	$C_{29}H_{60}$	408	0.7797	*880	345	....

*Determined under vacuum and calculated to atmospheric pressure.

In view of the foregoing, may it not be asked if the technicians of both should not now profitably consider the further development of processes involving the utilization of the temperatures of molecular instability of hydrocarbons, at which temperatures molecular readjustment and incorporation of new elements is most easily effected.

To stimulate such development (as from inquiries few know of its existence) the accompanying table is presented.

molecular instability of butane is not given, judging from various operations, covering the cracking of butane, it is judged that that temperature will not be greatly in excess of 800° F.

Definition of Term

In further explanation, quoting one definition, "Temperature of molecular instability is the degree of heat at which the bonds of intermolecular attraction be-

(Continued on Page 32)

EXAMPLE IN USE OF TABLE

Oil Sample, Weight per Gallon 7.21 Pounds

Boilover: 400-500°—26%; 500-600°—42%; 600-700°—30%; over 700°—2%

	C	H	
400-500°—$C_{18}H_{38}$—7.21×0.26=1.87=1.59 lbs.		0.28 lb.	
500-600°—$C_{36}H_{74}$—7.21× .42=3.03=2.58 lbs.		.45 lb.	Oil, 1 gallon
600-700°—$C_{28}H_{48}$—7.21× .30=2.16=1.83 lbs.		.33 lb.	
Over 700°—$C_{32}H_{66}$—7.21× .02= .15= .13 lb.		.02 lb.	
	6.13 lbs.	1.08 lbs.	7.21 lbs.

Gas Sample, by Volume 250 Cubic Feet

(Methane, 85%; ethane, 10%; propane, 3.5%; nitrogen and impurities, 1.5%)

	C	H	
Methane CH_4 $\frac{250 \times .85}{23.6} = 9$ lbs. =	6.75 lbs.	2.25 lbs.	
Ethane C_2H_6 $\frac{250 \times .10}{12.5} = 2$ lbs. =	1.60 lbs.	.40 lb.	
Propane C_3H_8 $\frac{250 \times .035}{8.5} = 1.3$ lbs. =	1.06 lbs.	.24 lb.	
	9.41 lbs.	2.89 lbs.	12.30 lbs.
	15.54 lbs.	3.97 lbs.	

Reaction

Gasoline series:	C	H	
Pentane C_5H_{12} b.p. 96.8°— 2.4 lbs. =	2 lbs.	.4 lbs.	
Hexane C_6H_{14} b.p. 156.2°—12.0 lbs. =	10 lbs.	2 lbs.	
Heptane C_7H_{16} b.p. 209° — 2.8 lbs. =	2.34 lbs.	.46 lbs.	
Octane C_8H_{18} b.p. 258° — 1.5 lbs. =	1.2 lbs.	.3 lbs.	
	15.54 lbs.	3.16 lbs.	18.70 lbs.
Free hydrogen			.81 lb.
Total			19.51 lbs.

Pentane, hexane, heptane and octane, in above proportions, form a gasoline. Gasoline boiling point 96.8-258° F., average 200° F., weight per gallon 5.40 pounds. Allowance factor 25 per cent, to include cost of heat generation and apparatus loss. Qualities: $\frac{18.70}{5.40} \times .75 =$ 2.50 gallons plus 81 pounds hydrogen.

Decision May Cause Numerous Plants Be Built in Panhandle

AUSTIN, Tex., July 5.—The Texas Railroad Commission has granted Hagy, Harrington and Marsh, Texas Panhandle producers, permit to extract gasoline from gas produced on their properties in the Panhandle and set aside the requirement that the residue gas be utilized. The producers had previously stated that their lands were being drained of gas by other companies operating pipe lines.

The order was based upon a ruling of the Texas attorney general's department that such action was "in the public welfare," and permissible under the conservation law.

It followed soon after a three-judge Federal court had declared void the common purchaser law applying to natural gas, on which independent operators had relied for a market outlet.

Governor Ross S. Sterling, following the granting by the commission of the order, said he was in sympathy with the action, and indicated that if a special session of the legislature is held this fall, as appears probable, measures to deal with the gas marketing situation will be submitted as one of its subjects.

Chairman C. V. Terrell of the Railroad Commission, in announcing the action, made a statement explaining the situation as it developed upon the court decision declaring void the common purchaser law. He said:

"This is as difficult as any single problem we have had before us this year. The necessity for immediate action arises out of the Federal court decision that destroyed the common purchaser statute on which the State and the commission relied for the protection that the commission must now attempt to afford by this means.

"The purpose of the restriction of the use of natural gas to light and fuel is to preserve and keep it available for the most useful public purposes. One effect, however, is that, except for the small amount of field boiler gas used, the utility systems are given the marketing of the entire gas production of the State. Important pipe line investments are necessary before a market for light or fuel can be had. The result is to strengthen the reserve and to greatly increase the ultimate profit of the concerns engaged in the transportation and marketing of gas.

"The effect is further to deprive owners of gas lands of any market for their gas other than that furnished by the utilities. It is obvious that the State cannot permit the restrictions to so operate as to confiscate independent properties. The utilities operating in every field of Texas except the West Panhandle Field have recognized this and have, by purchasing, placed their own production and that of independent producers on some equitable basis.

"In the West Panhandle Field we have a different condition. The hearing before the commission proved that the marketing is completely controlled by five pipe lines, each of which is an integrated part of some important utility system operating outside of the State. Each of them in the common purchaser hearing pleaded their status as foreign corporations as a bar to the enforcement of the regulations of this body under authority of the act of the legislature. The court held that as foreign corporations engaged in interstate commerce they cannot be compelled to common purchase.

"The fact that the gas is being taken

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Viscosities of Rotary Drilling Muds Exceptional Clay Mixtures Are Not Truly Viscous

By H. A. AMBROSE and A. G. LOOMIS
Mellon Institute of Industrial Research and Gulf Research Laboratory, Pittsburgh, Pa.

In the past several years viscosity has been recognized as an important factor in a study of rotary drilling muds. The resistance of a mud to flow, as expressed by its viscosity, determines the ease with which it may be pumped and its ability to release cuttings and gas. Because of so-called plasticity, the ordinary laws governing the motion of a truly viscous liquid cannot be applied to suspensions of clay in water. Drilling muds in general, and particularly those containing colloidal clays or bentonites, do not have viscosities that are constant at constant temperatures. The viscosity of a clay-water mixture varies not only with its previous treatment but also with the shearing stress applied to it. The usual flow tube or rotary instruments (Stormer and MacMichael) do not measure the true viscosities of such mixtures.

Flow in Colloidal Suspensions

For some time it has been recognized that the flow of a clay suspension through a tube is not strictly viscous in nature. The rate of flow of water or oil

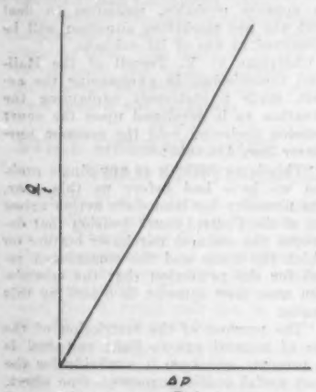

Fig-1

through a pipe or tube, in viscous flow, is proportional to the pressure gradient along the tube, as represented by Figure 1. Express in C.G.S. units:

$$\frac{Q}{t} = \frac{K\Delta p}{\eta} \qquad (1)$$

where:

$\frac{Q}{t}$ = volume per unit time,

$K = \pi R^4/8$

R = radius of tube,

η = viscosity constant, and

Δp = pressure gradient

But the flow of a clay suspension or a mud fluid may be approximately expressed by the following equation:

$$\frac{Q}{t} = \frac{K}{\eta}(\Delta p - p_o), \text{ in which} \qquad (2)$$

K = a constant of the instrument, and intercept of

p_o = extrapolated line to pressure axis.

When the rate of flow is represented graphically as a function of the pressure gradient, p_o is given by extrapolation of the curve to the pressure axis. From Figure 2 it is evident that, in using any instrument measuring volume of flow as a function of the pressure gradient, Equation 1 may not be used to calculate the viscosity. Experimental evidence also shows that the measurements of flow of a mud may not be represented by the extrapolated straight line of Figure 2; actual data follow the dotted curve through the origin.

Mechanism of Flow

When a plastic material, such as a clay suspension, flows through a tube, the mechanism of flow differs from that for viscous liquids. At low pressure such materials flow as a plug, there being no shearing in the main body of the fluid but only at the walls of the tube,

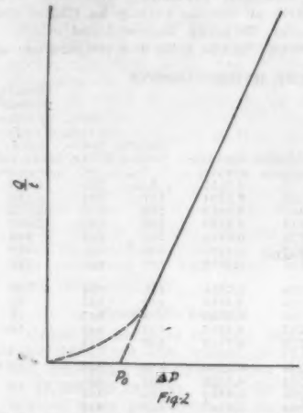

Fig-2

that is, slip at the wall. At higher pressures the plug breaks up and shearing takes place in the main body of fluid as well as at the walls. The layer of water or solution at the wall of the container allows higher rates of shear in this layer than would exist in the main body of mud itself if it were a simple viscous liquid. The viscosity of the water layer is probably low (approximately 1 centipoise), while that of the mud may be high and decrease with the shearing stress. Owing to such slip, the volume of flow through a single tube is not a measure of flow attributable to viscosity of

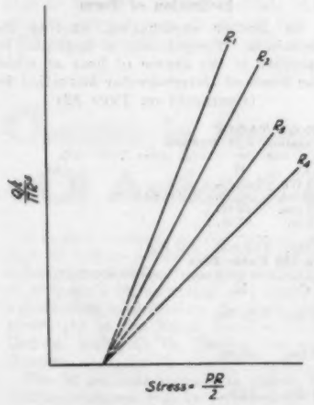

Fig-3

the mud alone, but also that due to the water layer which allows faster flow than may be permitted by the main body of mud. Measurements must be made in tubes or pipes of several diameters to allow calculation of the flow due to slip and flow due to fluidity or viscosity.

Figure 3 shows flow curves typical of bentonite suspensions, where several tubes of different radii were used.

The volume flow per unit time divided by πR^2 is plotted against shearing stress at the walls of the tube. If there were no slip at the walls of the tube, the lines would coincide and the flow curve would be independent of the dimensions of the instrument. From such a family of curves may be calculated the slip coefficient of the fluid, volume of flow accounted for by slip and by fluidity. From the latter, the actual viscosity of the fluid may be calculated; the viscosity of a bentonite suspension is found to decrease with shearing stress as shown by Figure 4.

Mathematical Analysis

A mathematical analysis of this method of treatment has been given by Mooney. (Mooney, J. Rheology 2, 2, 210, 1931.) Mooney makes one approximation that is not strictly true; i.e., that the layer of slip film is of zero thickness. Reiner, (J. Rheology 2, 4, 337, 1931) accurately treats the viscosities of such fluids, making no such assumption. Reiner, in his development of equations for the viscosities of such fluids, correctly assumes that the slip film is of real thickness and of definite viscosity (probably that of the water). He also makes the assumption that the viscosity of this layer is constant at constant shearing stress. At present there is no evidence for such an assumption except partial corroboration in some recent work we have done on bentonite suspensions, whose viscosities were measured using Mooney's treatment of the results. Both treatments require

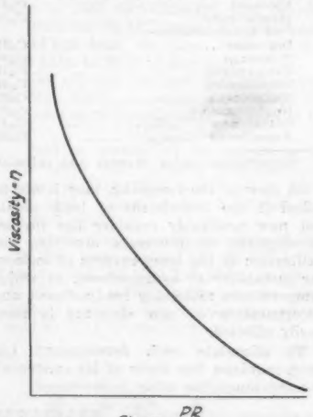

Fig-4

that the flow characteristics must be measured in two or more tubes of different radii; otherwise the measurements will give apparent viscosities, but none that are strictly accurate for application to flow in tubes or pipes.

In other words, Mooney's treatment requires that the flow characteristics of a mud fluid may be calculated only when two values are found, this slip coefficient and the viscosity, both of which vary with the shearing stress applied. Reiner's treatment, which is more accurate mathematically, requires determinations of the thickness of the water layer at the walls of the tube, the viscosity of the layer, and the viscosity of the mud itself. From our preliminary measurements on bentonite suspensions, it appears that the thickness of the water layer is a constant for a given mud and that its viscosity is that of water.

Another factor causing difficulty in the measurement of mud viscosity is the thioxtropy of such fluids, i.e., their property of gelling. The viscosity of a mud varies not only with the shearing stress applied to it but also according to its previous history. If its gel is not sufficiently broken before a flow measurement is made, its measured viscosity will be high. It is desirable that constant shearing stress be applied to the mud some time before the pressure drop is measured. For instance, the pressure drop may be measured by manometers some distance from the inlet of the flow tube.

Rotating Cylinder Viscometer

The rotating cylinder viscometer, such as the Stormer, MacMichael, or Couette,

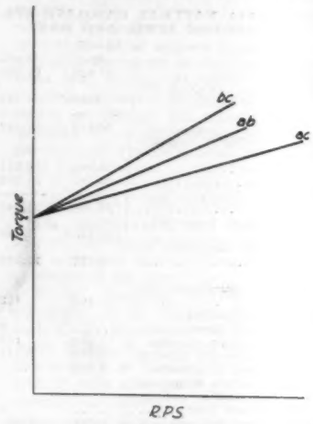

Fig-5

is also subject to the same difficulties as the tube in measuring the viscosities of muds. As in the case of measuring flow in a single tube, the slip of the fluid at the wall causes the measurement of apparent viscosities lower than the actual values. The Stormer instrument is not suitable in any case, because the flow between the cylinders is prevented from being linear by the presence of baffles. The MacMichael and Couette viscosimeters may be adapted to

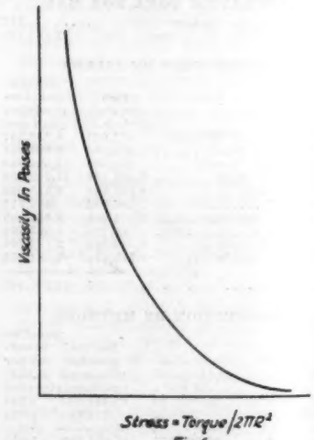

Fig-6

measurement of mud viscosities by changes in design.

Mooney also treats the flow of muds in rotation viscometers. In order to find the slip coefficients of mud-fluids, the radii of the cylinders must be varied as in the case of the tubes. In a concentric cylinder instrument the rate of rotation of one cylinder is measured as a function of the torque applied to it; the torque is measured either by the torsion

in a wire on which the inner cylinder is suspended, or by the weight necessary to rotate one cylinder when the other is fixed. Such instruments are described by Couette, Hatschek and others. Their application to the viscosities of muds requires the use of two inner and two outer cylinders allowing three combinations of radii, whose choice is amply discussed by Mooney. Our own viscosimeter, recently developed along these lines, gives results consistent with viscosities as measured in tubes of varying radii. Figure 5, a plot of typical results, shows the torque exerted on the inner cylinders, measured by the deflection of a torsion wire, as a function of the rate of rotation of the outer cylinder. The curves are extrapolated to the torque axis.

How Curves Were Obtained

The three curves were obtained by the use of three combinations of inner and outer cylinders, ab, bc, and ac. From the rates of rotation at constant torque the slip coefficient may be found. By subtraction of the rate due to slip from the total rate, the rate of rotation accounted for by the fluidity is found; and from this result the viscosities of the sample may be easily calculated. A typical viscosity curve, as in Figure 6, shows the variation of viscosity with the average stress between inner and outer cylinders.

The torque constant of the torsion wire is readily found by calibration against a liquid of known viscosity. The instrument should be built to prevent end-effects on the inner cylinder, as shown by Couette.

Viscosities thus found are accurate, but the slip coefficient must also be used when applying the data thus obtained to problems of flow. Only when the radius of a pipe or tube is large (approaching infinity) is it strictly justifiable to apply the viscosity of a mud to the usual formulas of flow without considering the slip coefficient. Practically, however, sufficient accuracy will probably be obtained if the calculations are for pipe of several inches or more in diameter. For calculations concerning small tubes and viscosimeters the slip coefficient must be included; it is not a constant, but varies with the shearing stress.

Measuring Mud Viscosities

The Stormer viscometer has been fairly commonly used for measuring apparent viscosities of drilling muds. The instrument is calibrated against liquids of known viscosities; in measuring the apparent viscosity of a mud, the rate of rotation of the inner cylinder, rotated by a weight through gears, is read off the calibration curve. If a single weight is used in making measurements on muds, the fact that the apparent viscosity varies with shearing stress (proportional to applied weight) is not observed. To obtain comparative results with the Stormer, different weights should be used and the apparent viscosities taken with the same weight or at constant speed of rotation. Otherwise it is possible for two different operators, using different weights, to obtain widely different apparent viscosities for the same mud. Since the results are apparent rather than actual viscosities, they cannot be applied to flow formulas, owing to the fact that the slip coefficient is not obtained. The same difficulty holds for results obtained with the MacMichael, the funnel or other common viscometer by whose use the slip coefficient is not determined. Such methods give comparative values of rates of flow for the particular instrument involved; the results are not necessarily checked with another instrument measuring apparent viscosities.

The rotation viscometer now under development shows possibility of rapid measurement of the flow characteristics of any mud fluid. The measurements are quickly made and readily calculated to give both viscosity and slip coefficient as functions of the shearing stress. These, in turn, may be translated to rates of flow in any size pipe or annular space as functions of the shearing stress involved. Measurements, both with tubes of different radii, and with three combinations of concentric cylinders, have given excellent checks on the viscosities of bentonite suspensions. Since these methods of measurement are still in the process of development, the available data are scanty. But measurements already made with the concentric cylinder apparatus show that actual viscosities may be quickly and accurately obtained with it. It is applicable to measurements with oils and other viscous liquids as well as with muds.

Four Completions in the Michigan Field Two Producers and Two Dry Holes

By GEORGE A. WHITNEY

MOUNT PLEASANT, Mich., July 2.—Four completions were reported from the area around the East Pool in Greendale Township, Midland County, two being producers and two dry holes. The largest well was Pure Oil Co.'s No. 1, 990 feet from the north line and 330 feet from the east line of the Mary Jacobs farm in the N half SE Section 9, Greendale Township, which produced an estimated 700 bbls. initial from the Dundee formation. This well is a little west and north of the East Pool proper.

Talbot Oil Co.'s No. 1 in the southwest corner of the State of Michigan land, in the SW SE SE Section 11, same township, and about a mile east of the heart of the East Pool and offsetting the Rheimenschnider well on the north, is reported with an initial of 500 bbls. in 24 hours. The pay was found at 29 feet in the Dundee.

The test of R. D. Malcolm in the northeast corner of the Vernon G. Hastings farm, NE NE NW Section 13, Greendale Township, looks like a failure as salt water was encountered at 53 feet in the Dundee. This well was drilled with a ginpole rig in the new East Pool extension, and the owners could have cashed in handsomely on it a few days ago, as it is the first west offset of No. 1 Stapleton, 640 feet distant, which came in recently with an initial flow of 1,000 bbls. daily. The Hastings well struck the Dundee formation 5 to 6 feet higher than the Stapleton well and oil men believe it is on a rise from which the formation dips to the east into productive soil. The results of the Stapleton and the Hastings tests tend to bear out the opinion of some oil men that the east border area will be found to be spotty in production. The failure of the Hastings well is not held as an indication that the district lacks profitable commercial development. Much production will be obtained there probably by tests now under way and others that will be drilled.

Wellman Oil Co. has abandoned its No. 1 on the John Bolen farm, SW SW NE Section 14, Greendale Township, Midland County.

Increases Production

In May when the Mellon-Pollock Oil Co. drilled in No. 2 well, 990 feet from the south line and 300 feet from the west line of the Lewis Thayer farm, NW SW SE Section 22, Vernon Township, Isabella County, and about 3½ miles south of Clare, it produced an initial of 300 bbls. Owing to larger production on nearby wells, the owners concluded it should be drilled deeper, resulting in an initial of 1,700 bbls. in 24 hours.

Field Pickups

Between 12 and 15 wildcats are now drilling or preparing to drill in the Central Michigan area, seeking new pools and extensions.

The Jones-Woodruff interests are reported to have let seven contracts for wells on the company's 80-acre farm, NW NW SW Section 13, Greendale Township, Midland County, now that No. 1 developed an initial producer of a little better than 300 bbls. a day.

Drilling permits were issued to the Pure Oil Co. to drill No. 3 well, 330 feet from north and south lines of the W. A. Cassidy & Co., in the E half NW Section 16, Greendale Township, Midland County; to drill 330 feet from the south and west lines of the A. Seeley No. 1 well, SW SE Section 9, Greendale Township, Midland County; to drill No. 2 well, 330 feet from the south line and 990 feet from the west line of A. Seeley farm, SW SE Section 9, Greendale Township, Midland County; to drill No. 2 well, 330 feet from the north and west lines of the John J. Bolan farm, W half W half NE Section 16, Greendale Township, Midland County; for No. B-5, 330 feet from the south line and 990 feet from the east line of the A. Bernard farm, SE SE Section 9, Greendale Township, Midland County. Permit was issued to the Columbia Oil & Gas Co. for No. 2 well, 330 feet from the north line and 990 feet from the west line of the William H. Hill farm, NE NW NE Section 16, Greendale Township, Midland County, and to Alvin C. Jones and Bernard E. Woodruff, trust managers, for No. 2 well, 990 feet from the south line and 330 feet from the east line of the Jones-Woodruff farm, NE SE NW Section 13, Greendale Township, Midland County.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective June 26, 1932)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Seal Beach, Alamitos Heights, Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Torrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Dominguez	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra
14-14.9	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	....	$ 55	$ 55	....	$ 65	$ 55	$ 55	$ 65
15-15.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
16-16.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
17-17.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
18-18.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
19-19.9	65	65	65	65	65	65	65	65	....	55	55	....	65	55	55	65
20-20.9	69	69	71	69	69	69	69	65	....	59	59	....	65	57	59	68
21-21.9	74	74	77	74	74	74	74	66	....	63	63	....	67	60	62	72
22-22.9	79	79	82	78	79	79	79	70	....	69	69	....	70	63	65	77
23-23.9	84	84	88	82	84	84	84	76	....	75	75	....	73	66	68	83
24-24.9	89	89	92	86	89	89	89	81	73	81	81	89	76	69	72	89
25-25.9	93	93	....	91	93	93	93	86	79	87	87	93	80	72	75	....
26-26.9	97	97	....	96	97	....	....	90	84	92	91	97	....	....	....	....
27-27.9	1.00	....	....	....	1.00	....	....	94	89	97	94	1.00	....	....	....	....
28-28.9	1.03	....	....	....	1.03	....	....	98	94	1.02	99	1.03	....	....	....	....
29-29.9	1.06	....	....	....	....	....	....	1.02	.98	1.07	1.02	1.06	....	....	....	....
30-30.9	1.09	....	....	....	....	....	....	1.05	1.02	1.12	1.05	1.09	....	....	....	....
31-31.9	....	....	....	....	....	....	....	....	1.06	....	....	1.12	....	....	....	....
32-32.9	....	....	....	....	....	....	....	....	1.10	....	....	1.15	....	....	....	....
33-33.9	....	....	....	....	....	....	....	....	1.14	....	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	....	1.18	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	....	1.22	....	....	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same prices as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum Co. adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon, and Olinda, up to 25.9 degrees; Richfield, Ventura Avenue, Midway-Sunset, Fruitvale, Kern River, Poso, Round Mountain, and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 82 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 92 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-22.9 degrees, 79 cents; 23-23.9 degrees, 84 cents and Standard's prices for oil of higher gravity.

Kettleman Hills—The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.03, Standard Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Santa Paula—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19.19.9 degrees, 65 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-22.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents.

Shiells Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Orcutt—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 59 cents; 21-21.9 degrees, 63 cents; 22.22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents; 26 degrees and above, 92 cents.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 22, 1931, posted 55 cents for oil of all grades.

Elwood Terrace—Standard Oil Co., effective June 26, 1932, posts 33-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.16; 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

Judge Ames Discusses Antitrust Laws and Petroleum Industry

CHARLOTTESVILLE, Va., July 5.—The United States will be the first country of the world to exhaust its petroleum reserves unless the present waste in production and consumption is curbed, C. B. Ames, vice president of The Texas Company, today told the Institute of Public Affairs at the University of Virginia.

Mr. Ames urged Federal legislation permitting the oil industry to determine in advance the legality of trade conferences and agreements on conservation of the crude supply and moderation of marketing and consumption methods.

"The United States is producing approximately 70 per cent of the crude oil produced throughout the world and is consuming approximately 70 per cent," Mr. Ames said. "It possesses probably less than 50 per cent of the world reserves. On the present basis of production and consumption, therefore, our petroleum reserves will be exhausted first. Notwithstanding this grave situation, these resources are being wasted."

Mr. Ames declared that 2,000,000,000 feet of natural gas was blown into the air daily in 1931 while only 1,000,000,000 feet was used by domestic consumers. Because the oil industry is manufacturing too much fuel oil, he continued, this fuel oil is displacing coal, with the result that railroads are being deprived of their legitimate revenues from coal tonnage. This oil should be saved and made into gasoline instead of being devoted to this lower use.

This waste in production and consumption, Mr. Ames indicated, is traceable to lack of workable legislation. He said a difference of opinion among oil men on the legality of limiting production and storage to the gasoline requirement forecasts as drawn up by the Federal Oil Conservation Board has thwarted any such course of action lest the oil operators be attacked by some attorney general. He also called attention to a suit filed by the State of Texas against 15 of the principal marketers in that state for alleged violation of the Texas antitrust law growing out of the industry's code of ethics. This code was first drawn by the industry, modified by the Federal Trade Commission and is now generally observed throughout the United States.

"The remedy," said Mr. Ames, "is to remove this difficulty by providing administrative machinery which can function in advance. When the Federal Oil Conservation Board forecasts demand and supply, the industry should be free to conform its operations by agreement so as to balance production with consumption. When the Federal Trade Commission approves a code of marketing practices, the industry should not be subject to attack by the attorney general of the United States or the attorney general of any state because of compliance with this code."

In support of his arguments, Mr. Ames quoted Robert P. Lamont, Secretary of Commerce, as saying that about 80 per cent of the horsepower of all prime movers of the country, fixed and automotive, is generated by oil and its products. Repeating Mr. Lamont's words, Mr. Ames said:

"If the supply (of oil) falters, the nation suffers its lack; if the supply overflows, the nation suffers because its irreplaceable oil and gas are driven into wasteful uses. If gas is wasted, either above or below ground, 120,000,000 Americans suffer a three-fold loss: First, because the gas generates no steam; second, because it will never bring oil to the surface; and third, because the oil which is left behind—robber of its gas content—becomes difficult, if not impossible, to recover."

HOBBS POOL ALLOWABLE

HOBBS, N. Mex., July 2.—The Hobbs Pool executive committee has named 29,500 bbls. per day as the allowable production of the pool during July. There are 157 oil wells in the pool.

H. B. OWENS SUCCUMBS AFTER BRIEF ILLNESS

H. B. Owens

H. B. Owens, supervisor of industrial sales for the Caterpillar Tractor Co., and well known throughout the pipe line industry in the United States, died June 28 at his home in Peoria, Ill., from pneumonia which developed after an attack of mumps. Mr. Owens, prior to his connection with the tractor company, has been farm boss for the Empire Oil & Gas Co. at El Dorado, Ark. At the time of his death he was preparing to move to California to take charge of a division of activity for the tractor company.

Late Fields

OKLAHOMA

The Texas Company's No. 2 Sandlin in Section 29-9-6, Seminole County, in the West Seminole Pool, was completed for 1,080 bbls. of oil from the Wilcox sand at 4,094-4,120 feet.

Two new locations were announced in the territory north of Wewoka: R. D. Donnelly and others' No. 1 in the SE cor. NE, Section 4-8-8, Seminole County, and Hudspeth and others' No 1 in the SW cor. NE, Section 3-8-8.

Production from the Oklahoma City Field on July 3 was 121,000 bbls. from 170 wells; on July 4, 72,270 bbls. from 139 wells; on July 5, 43,870 bbls. from 91 wells.

Gypsy Oil Co. has made location for No. 2 Rentie, NE cor., Section 17-9-6, Seminole County.

KANSAS

Skelton Oil Co.'s No. 1 Ott, C SE SE, Section 16-19-14w, Barton County, 4 miles west and 2 miles north of Great Bend, found a showing of oil at 3,604 feet. The top of the Silicious lime was found at 3,540 feet and at 3,599 feet water was found which rose 2,600 feet in the hole. At the time the oil was found 2,600 feet of water was in the hole. Casing is being landed on top of the oil showing at 3,604 feet.

In the south extension to the Voshell Pool, in McPherson County, L. A. Mylius and others' No. 1 well in the SE cor. SW, Section 16-21-3w, was preparing to spud.

The Gorham Pool, in Russell County, was extended a half mile to the east in the south end. Billings Oil & Gas Co.'s No. 1 Witt, NW cor. SW SE, Section 4-14-15w, found oil in the Oswald lime. The oil, which is from 32 feet of pay, rose 1,100 feet in the hole in three hours and over night 2,000 feet of oil rose in the hole. Swabbing tests were made and the well made 100 bbls. Preparations were being made to put the well on the pump.

Mid-Kansas Oil & Gas Co.'s No. 1 Etter, NW cor. NE SE, Section 3-20-3w, in the Johnson Pool, in McPherson County, was drilling at 3,100 feet, and will test the Viola lime and Simpson sand formations. The hole will be carried to the lower formations in an endeavor to ascertain the possibilities underlying the chat formation.

NO NEW COMPLETIONS IN TIOGA OR POTTER

WELLSBORO, Pa., July 5.—The next well due in the Hebron gas field in western Potter County, which thus far has two good gassers from the Oriskany sand, is G. H. Schrack's No. 1 Tassell, which at last report was drilling at 4,620 feet. The Allegany Gas Co. was drilling at 2,300 feet on the Matteson farm. In Allegany Township, J. B. Reed was drilling below 3,250 feet in No. 1 Champlain. The Allegany Gas Co. was drilling past tools at 5,675 feet in a test on the Emporium Lumber Co. land in the East Fork district. This company has made a location on the Carmer farm in Hebron Township.

A round up of the Tioga County Field disclosed only a few active operations. Lycoming Gas Co. was ready to start drilling on No. 1 Finch in Farmington Township, and was rigged up to drill No. 3 Farr in Lawrence Township. The Lester test on the William West farm in Tioga Township was drilling at 5,770 feet, 8 feet in the Oriskany sand, with nothing showing. Fillmore Natural Gas Co.'s No. 1 was moving in material on the Tubbs lot in Farmington Township. Mutual Natural Gas Co.'s No. 2 R. R. Murray in Farmington Township was drilling at 1,600 feet. The Goebel well on the B. Burdette farm, in Tioga, which was delayed by a fishing job, was drilling again and had reached a depth of 1,700 feet. All the pipe was pulled from the Wells Co.'s test on the Tioga County farm and the hole plugged and abandoned.

Decision May Cause New Panhandle Plants

(Continued from Page 29)

from Texas with almost no return to anyone in this State does not lessen our interest in its conservation. However, when these companies construe our regulations conserving gas as license to so use the market monopoly thus created as to take by drainage the gas of independent operators they are making a mistake. Texas does not lack the power either to protect its citizens or to conserve its resources, and for any combination of capital, no matter how powerful, to continue to operate in Texas in ways repungant to the public welfare of this State is dangerous. This problem can be reached in some legal way. It alone does not justify a special session, but, if for other reasons a special session becomes necessary, we will request the governor to submit this matter to the consideration of the legislature.

"In the meantime, the only thing to do is to follow the opinion of the attorney general and permit the independents to use their gas for other purposes under such restrictions as may seem necessary to the commission."

Molecular Instability Table Aids in Research

(Continued from Page 29)

tween the relative atomic constituents are stretched to a point of inequilibrium."

At that temperature the hydrocarbons enter readily, it is said, either in vapor or liquid phase, into combinations for molecular readjustment with other elements, as free hydrogen gas or hydrogen carrying radicals, such as CH_3, C_2H_5, etc., which may be either produced through cracking of the more unstable oil hydrocarbons or introduced from an outside source.

Through the incorporation of free hydrogen gas or hydrogen carrying radicals into oil hydrocarbons in the state of molecular instability, the nature of the oil hydrocarbon may be changed without undergoing dismemberment of its constituents, as hydrogen incorporation in a free state or in a radical form will increase the hydrogen content of the hydrocarbon, reduce its specific gravity and lower its boiling point to that degree, falling within the limits of the oil hydrocarbons of the gasoline series as shown in the foregoing table.

Accompanying the table referred to is an example of its practical application.

The oil to be converted, in one described patented process, proceeds downward in a tower containing several plates encountering ever-increasing temperature imparted from heated hydrogen containing gas, equilibrium being sought between the two, resulting in mutual interchange, producing hydrogenation of the unstabilized, vaporized liquid.

The pressure condition under which the operation of the above process is conducted is established by the pounds per square inch needed to cause the lightest compound to unstabilize before vaporizing. On the other hand, judging from the conversion of gases and vapors at atmospheric pressure, similar operations may be conducted at substantially atmospheric pressure.

The foregoing briefly describes the utilization of temperatures of molecular instability for the purpose of increasing the hydrogen ratio, that being of special interest to the refiners.

On the other hand, the opposite is of a special interest to the manufacturer of natural gasoline.

In his case, if he desires, for example, to convert butane to a motor fuel he will desire to increase the ratio of carbon to hydrogen in the mass operated upon.

In which case may he not profitably utilize a gas such as CO_2?

Then if the butane were heated to the temperature of molecular instability and contacted with the CO_2 some such result as the following might be obtained:

$2(C_4H_{10}) + CO_2 = C_9H_{20} + O_2$, or

$2(C_4H_{10}) + CO_2 = C_7H_{16} + 2H_2 + C_2 = C_7H_{16} + CH_4 + CO$

In the first case the reaction would result in the formation of nonane and free oxygen while in the second case the result would be the formation of heptane, water and free carbon, which in turn might react to form methane and carbon monoxide as indicated.

In closing, as is well known, many substances have the power of condensing and absorbing various gases and effecting catalytic reaction, and it is therefore suggested that the desired results may be more readily accomplished and regulated by the utilization of a selected catalyst.

TANK WAGON CHANGES

(Continued from Page 26)

June 30 and advanced this price to 18½ cents in Fresno.

Standard Oil Co. of New York advanced or reduced the gasoline tank wagon and station prices on July 1 by omitting tenths of a cent except halves of a cent. The new prices are expressed in half cent differentials and the nearest half or whole cent was taken as the new price.

Standard Oil Co. of Indiana revised the gasoline tank wagon and station prices in Bartlesville, Okla., on June 25 to 15½ and 18 cents with kerosene 9 cents. On June 16 the kerosene price was reduced to 7 cents in Wichita, Kans., and to 7½ cents in St. Joseph, Mo.

Continental Oil Co. advanced the gasoline tank wagon and station prices 1½ cents in Idaho and Utah on June 28. On July 1 the kerosene price was reduced 1 cent in Colorado and Wyoming except in Pueblo where it was reduced one-half cent.

Standard Oil Co. of Nebraska advanced the gasoline tank wagon and station prices 1 cent June 21 instead of 1.1 cents as reported here a week ago.

HEADQUARTERS IN FORT WORTH

The Sinclair Prairie Oil Co. is moving its Texas division headquarters from Tyler to Fort Worth. Division Superintendent Glen Harroun and his staff and the land department, of which W. G. Gish is the Texas head, are included in the move. The Fort Worth offices will be in the Sinclair Building.

Import Tax to Shut Out Gasoline Shipments and Reduce Crude and Fuel Movement

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, July 2.—Imposition of the new import duties on crude petroleum, gasoline and other products will bring about a radical readjustment in import and export operations on gasoline, but will have little immediate constructive effect in stimulating demand for domestic crude, even temporarily, in the opinion of leading Eastern oil executives. Actual imposition of the tariff, with respect to crude and fuel oils, has brought to light the fact, not sufficiently emphasized hitherto, that in Mexican and South American petroleum the industry is dealing with a "specialty crude," and that the sole object of the importation of this oil has been to maintain the bunker fuel oil business.

The immediate effect of the tariff, it is felt, will make for higher refined products prices in the United States, notably on fuel oil, which is expected to be advanced 10 cents per barrel at Atlantic and Gulf ports in the near future. Refinery gasoline markets, it is believed, will also be strengthened somewhat by the drop in imports, although the market is not expected to immediately reflect this condition owing to the fact that importers have been piling up stocks of foreign gasoline during the past several weeks and these stocks will have to move into consuming channels before replacement buying of the domestic product may be looked for. California's surplus gasoline stocks, as well as excess holdings in other refining areas, are expected to be cut down somewhat as domestic gasoline supplants the foreign product, although this prospective improvement in the statistical position of the gasoline market will be nullified if overoptimistic producers and refiners increase their operations substantially as a result of the tariff action.

Gasoline Imports

Gasoline imports, it is indicated, will be virtually terminated by the 2½ cents per gallon import tax. Gasoline imports during 1931 approximated 16,600,000 bbls. Motor fuel imports for the first six months of the current year, it is estimated, will approximate 7,250,000 bbls. Allowing for an estimated drop of 10 per cent in domestic consumption this year, the barring of further imports by the new import duty will create a potential market for some 7,750,000 bbls. of additional domestic gasoline output during the second half of 1932, although the probable sharp drop in exports will considerably offset this increase in potential demand and should be taken into account in scheduling refinery operations.

The sharp drop in domestic petroleum demand, eastern oil executives feel, has already offset much of the constructive effects which proponents of the tariff had originally looked for, although the import duties, it is thought, will tend to minimize the effects of curtailed gasoline consumption upon the domestic price structure.

As had been indicated by previous comments on the tariff situation, the actual imposition of the new duties will result in a considerable revision in tanker operations, with imports supplanted in East Coast markets by supplies from the Gulf and California, and export shipments, formerly moving from these points, diverted instead in large measure to the Caribbean refining area.

Gasoline naturally is most affected by the new import tax schedules, and a virtual cessation of motor fuel imports is indicated. Crude oil imports may be curtailed somewhat, but by no means discontinued, and if the present understanding of eastern refiners in regard to the probable regulations covering fuel oil imports are not erroneous, import movement of bunker fuel oil will be little affected.

Probable Effects Summarized

General sentiment affecting operating changes resulting from the placing of the new tariffs into operation may be summarized as follows:

Gasoline—Import tax will practically terminate all receipts of foreign motor fuel, with large American interests handling export business out of the Caribbean refining area.

Crude oil—Continued imports looked for on "specialty crudes" for asphalt manufacture and refining into fuel oil for delivery to marine consumers.

Fuel oil—Uninterrupted imports looked for, particularly if industry's impression that drawback allowance exempting certain consumers is borne out by regulations.

Lub oil—Quantities hitherto imported relatively small, and product unaffected as import duty of 4 cents per gallon merely equals the domestic excise tax of 4 cents per gallon on sales of lub oils refined in the United States.

Pending the receipts of regulations covering the operation of the new petroleum import duties, major interests here are withholding definite comment on their operating plans.

Shell Situation

It is learned, however, that Shell Eastern Petroleum Products, Inc., which has been one of the largest importers of gasoline, will discontinue motor fuel imports entirely. This company has been receiving regular shipments from Curacao. Its affiliated companies, Shell Oil Co. of California and Shell Petroleum Corp., operating in the Mid-Continent, both have sufficient surplus gasoline production to take care of Shell Eastern's marketing requirements, and the Eastern company will henceforth draw its supplies of gasoline and other refined products from these sources.

In the past, largely as a matter of transportation convenience, the two American Shell producing and refining companies have shipped a large part of their surplus gasoline into export channels in exchange, on a gallon-for-gallon basis, for gasoline shipped from the Royal Dutch-Shell Curacao refineries to Shell Eastern. Curacao's shipments to the United States Atlantic Seaboard will now be discontinued entirely, in so far as gasoline is concerned, and export sales of the American Shell companies largely handled out of Curacao.

Early in 1931, when the major importing companies agreed to curtail their gasoline imports, Shell Eastern cut its imports from Curacao by 50 per cent, making up the shortage by shipments from Shell Oil and Shell Petroleum refineries, which will now supply all of its requirements.

Other Shell companies in the United States which have been importing crude for refining into asphalt and fuel oil, as well as fuel oil itself, are expected to continue their import operations much along former lines.

Standard Oil Co. of New Jersey, it is expected, will likewise largely eliminate gasoline imports, taking care of its domestic marketing requirements by the production of its own and subsidiary company's refineries in the United States, and concentrating much of its export operations at Aruba. The New Jersey company also recently completed a topping plant at Carapito, Venezuela, the terminal of its pipe line in that country and site of its export terminal there, and is producing considerable quantities of fuel oil there.

Standard of New Jersey is expected to handle its bunker oil business largely along former lines, bringing in enough South American crude with heavy fuel oil content and sufficient fuel oil to round out its contract deliveries and spot sales in this country.

Other companies are as yet unwilling to comment on their plans for meeting the tariff obstacle, although it is indicated that their general method of procedure will be in line with that adopted by Shell and Standard of New Jersey. These latter two companies, along with Gulf and Standard of Indiana, have been the major American importing companies, but the Indiana company is of course out of the picture as a result of the sale of its South American, Mexican and other foreign holdings to Standard of New Jersey.

Fuel Oil a Factor

In so far as the major companies are concerned, therefore, imported gasoline is definitely out of the picture so long as the 2½ cents per gallon tariff impost remains efffective. Foreign fuel oil, however, remains very much a factor. The great bulk of the bunkering business on the Atlantic Seaboard is for vessels under foreign registry, however, the oil companies will have to put the latter on an equal footing. If a drawback allowance cannot be obtained for fuel oil and crude oil imported in bond, it is indicated that the refiners will nevertheless be compelled by competitive conditions to give their foreign flag customers the same prices quoted to ships operated under American registry. This will be done, it is believed, by an increase of 10 cents per barrel or more in the posted price for bunker "C" oil, placing all purchasers on the same price level. The fuel oil situation is extremely strong at present, and refiners here believe that the maximum price of 95 cents per barrel specified in most bunkering contracts for 1932 will be attained before the year is out.

Fuel oil refined from imported crude, for delivery to ships under United States registry and engaged in foreign trade or East-West Coast service, via the Panama Canal, will also be exempt from the import duty of 21 cents per barrel, according to the present understanding among eastern refiners, and this will naturally make for continued importation of Mexican and South American "fuel oil crudes."

A well-known executive of a leading independent company, which has not been an extensive importer, and which has been one of the proponents of the import tariff on oil, said:

"It is our feeling that, if business had not slowed down, the shutting off of foreign crude would have helped the markets to some extent, particularly the fuel oil market on the north Atlantic Coast. However, the demand has considerably fallen off and the chances are that the shutting off of foreign crude will do very little except maintain the status quo. There are of course a few local situations where foreign gasoline is coming in and demoralizing the entire market. These should be corrected as a result of the tariff.

"In general, however, we feel that the object which most of us had in view in desiring the tariff will not be attained, although the tariff will on the other hand restrict imports to such an extent that the falling off in domestic business will not be so severely felt."

Aid California Shipments

A substantial increase in movement of California gasoline to the Atlantic Seaboard is looked for as a result of the shutting off of imports of foreign gasoline, and it is expected that tanker movement of motor fuel from the Gulf Coast area to principal Atlantic ports will also show an early acceleration. The added consumption of domestic gasoline, in place of the foreign, is expected to materially strengthen the price basis for motor fuel, assuming that refiners do not overestimate the potential benefits to their market resulting from the tariff situation, and overproduce gasoline during the summer months.

Fuel oil exports, as well as motor fuel shipments to foreign markets, will be adversely affected by the tariff. A number of foreign flag vessels bunkering at New York and other Atlantic ports take on nearly as much oil at their home ports abroad as they do here. Hitherto, it has been the practice of refiners to ship bulk cargoes out of the American Gulf to their storage terminals abroad for handling this business, but it is now indicated that this replacement fuel oil will be moved largely out of the Caribbean refining area, unless the drawback provisions of the new regulations permit a continuance of the former practice.

However much of the proponents of the tariff may have wanted to benefit domestic crude producers through the petroleum tariff act, it is extremely questionable at this writing if the immediate effects of the new duties will be sufficiently constructive to necessitate any real increase in the demand for domestic crude. The tariff will, however, have the effect of strengthening domestic price structures, and minimizing the effects of dwindling consumption upon American home markets.

Lycoming Producing Corp. Consolidates Important Gas Units

The Lycoming Producing Corp. has been organized to bring together under one operating head the Lycoming Natural Gas Corp., the Reserve Oil & Gas Corp., and certain interests of Benedum & Trees. The main office will be in Pittsburgh.

The following officers have been chosen: President, J. B. Tonkin; vice presidents, J. C. Trees and T. B. Gregory; secretary, Denton Borger; treasurer, R. D. Beardsley; assistant secretaries, Edward M. Borger, E. E. DuVall, John Miller, C. H. Rupp and H. A. Koechling; auditor, F. B. Flahive; chief engineer, H. C. Cooper; manager, J. French Robinson.

Directors: Christy Payne, J. B. Tonkin, H. C. Cooper, J. French Robinson, T. R. Weymouth, T. B. Gregory, J. C. Trees.

DEATH OF BRADEN P. MEYERS

Braden P. Meyers, Sapulpa, Okla., oil producer, was killed on Monday, July 4, at Bella Vista, Ark., in a head-on collision of automobiles. With him in his car at the time of the accident was his fiancee, Miss Ethel Wilson, daughter of the late Hiram Wilson, who was a prominent operator in the Creek County, Oklahoma, oil fields.

Newest Proration Order in East Texas District Will Help Crude Price Structure in Field

By L. E. BREDBERG

DALLAS, Tex., July 5.—After the new proration order was issued this week cutting back the per well allowable to 50 bbls. in East Texas, effective July 1, and holding the top allowable to 325,000 bbls. as it has been in the past, until September 1, the East Texas pipe line committee became active in seeking connections to all unconnected wells, and intimated that the purchasing and pipe line companies' co-operation would be sought each week in connecting to the newly completed wells. The Sun Pipe Line Co. announced that it would connect to 25 wells immediately, and Jack Pew, chairman of the committee, requested other companies to fall in line and help as much as they could. This was an exceptionally encouraging report to operators in the district, who felt that if a top per well allowable of 51 bbls. was maintained until September 1, as the previous order of the commission read, that there would be trouble in gaining connections for the newly completed wells, that there would be distress oil thrown on the market and the price structure weakened if not broken, and the price brought down to 50 cents per barrel as one major company official stated it would.

Locations were brought down to 133 during the week, and expectations are that the ensuing weeks will witness a decline in the number of new tests started, and completions decrease accordingly. For many weeks there has been an average of over 20 wells completed each day. The week saw the completion of 166, North Gregg continuing to lead with 56 producers. Forty-nine of the new locations were staked in that part of the field, while south Rusk, the next most active spot registered 31 new tests starting, and had 45 completed.

New Order Satisfies

A petition from leaseowners holding nearly 104,000 acres in the producing area, and royalty owners holding over 93,000 acres in the field was responsible for the Railroad Commission changing its previous order which would have given the field an increased allowable every week as more wells were completed, and each one allowed to flow 51 bbls. The new order apparently satisfies the majority of the lease and royalty owners, and will bolster the crude price in the district, if not having a tendency to bring it above the present 98-cent level. There were over 6,525 producing wells in the district when the new order went into effect, but approximately 300 are either not producing their daily allowable, or are standing "dead," thereby holding the daily production to 325,000 bbls. per day or below.

Many operators in the field were opposed to another cut in the per well allowable, saying that if the wells are cut back every two weeks, as they have been in the past, and now stand to be so treated, the daily gross revenue from the wells will be so low as to force many of the operators into the hands of receivers. These opponents of the new order are demanding that withdrawals from storage in the district be slackened or entirely shut down, giving the producers benefit of the co-operation they have heretofore afforded the Railroad Commission, and all interested parties in obeying the new orders as issued, and agreeing to take the new cuts in allowables as they regularly came along every two weeks. They contended that the price should be raised accordingly, if the per well allowable is to be continuously cut back, reaching the low estimated figure of 30 bbls. per day, which would give the well owners only $29.40 gross revenue from each well. Withdrawals from storage averaged 63,170 bbls. for the week ending June 22.

The pipe line committee will hold a meeting at Dallas, July 6, at which time it is hoped that purchasing and pipe line companies will guarantee that practically all unconnected wells in the district receive connections.

Cherokee County Well

The southwest corner of the field got another extension this week, C. L. Tubbs and others' No. 1 J. H. Sharp in the M. De Los Santos Coy Survey, Cherokee County, coming in for an initial production of 80 bbls. in one-half hour through open tubing, from total depth of 3,722 feet, producing from only 1 foot of saturated sand. This stretches the Joiner area another three-quarters of a mile to the west. Bottom of the hole is standing below the water level, which places the well in a dangerous situation from that standpoint.

While the Tubbs well was extending production farther to the west in Cherokee County, T. J. Carter's No. 1 Kelly, approximately 1,900 feet southwest of Merry Brothers and Perini's discovery well of the county, swabbed 100 per cent salt water. Total depth of the hole is reported at 3,762 feet, which is no doubt in error due to crooked hole. The test is also approximately 3,200 feet southeast of the new Tubbs extensioner, and is in the M. De Los Santos Coy Survey, precluding the possibility of production being found farther to the south and southwest. This is an important marker on this end of the field, and helps in defining the field, which has already been limited on all sides but this southwest corner.

Western Rusk County

Adams and Lyles' No. 1 Kersh in the E. B. Fowlkes Survey, near the Cherokee-Rusk County line in western Rusk County, was completed for 50 bbls. per hour through 2½-inch tubing, this week, at a total depth of 3,634 feet, 5 feet in the sand, proving more acreage to production, and extending Rusk County production farther to the southwest.

Sun Oil Co.'s No. 1 Alph Lee in the Peter Tipps Survey, midway between the nearest oil and gas producers, and believed to be on the dividing line between the oil and gas producing areas, refuses to flow its daily allowable, the company having installed various bottom hole chokes, and is trying other methods to make a flowing well. It will perhaps be put on the pump to produce its allowable. Bottom of the hole is minus 3,312 feet.

The Zion Oil Co. finally abandoned its No. 1 Barnett in the J. Taylor Survey, on the western edge of the Kilgore area, western Gregg County, after several unsuccessful attempts to shut off salt water and make a producer. It was drilled to 3,752 feet after producing awhile at 3,750 feet then going dead, but started showing salt water at the greater depth and was plugged back 100 feet, to 3,652 feet, but with no success. It is but a short distance north and a west offset to the nearest producers, and is another west edge marker for the field.

Upshur County

Cranfill and Reynolds' No. 2 J. Williams in the McKinney and Williams Survey, Upshur County, on the north end of the field, extended production to the north and west, when it came in making 15 bbls. in 15 minutes through 1-inch choke. Bottom of the hole is minus 3,301 feet.

Roeser and Pendleton drilled in No. 3-B Nicholson in the Marshall Mann Survey, Upshur County, this week for 58 bbls. in 40 minutes through 3-inch tubing choke, at a total depth of 3,620 feet. This well offsets the company's No. 2-B Nicholson which was abandoned as a dry hole about three weeks ago. Several dry holes have been drilled on edge inside locations in the field, but none has been completed as dry farther within the field.

Maddox Development Co.'s No. 1 Willie Starr in the C. H. Cooper Survey, Upshur County, 2 miles east of the small producer of Cranfill and Reynolds, refuses to flow, and is now swabbing. It will no doubt require pumping to produce. Total depth is 3,666 feet. These two wells mark the northern limits of the field.

Gladewater Limits

The Texas Company's No. 3 H. L. Phillips in the D. B. Choate Survey, northwest of Gladewater, western Gregg County, extended production a short distance this week, but the well made around 30 per cent basic sediment and water on its completion of 60 bbls. per hour through one-half-inch tubing choke, at a total depth of 3,705 feet thereby marking the limits of the field in that direction. It has an elevation of 393 feet. The Gladewater area has been one of the most, if not the most active, drilling areas in the field during the past several months, with a heavy withdrawal of oil which has brought many of the wells to the pumping and salt water stage. Many wells have been drilled on townsite lots, the 660-foot offset rule having been ignored in staking locations in the town. The first by-passes were also found in this area.

The southern end of the William King Survey marks the northwestern limits of the Lathrop area, Upshur County, several wells completed in this area failing to flow on their initial test. Dorfman and Reynolds' No. 1 J. B. Miller in the southwest part of the survey and the Service Drilling & Royalties Co.'s No. 1 Free in the southeast corner of the survey, both failed to flow when brought in. A test was made on the latter at minus 3,306 feet, and the latter failed to flow when tested at 3,760-78 feet. It was deepened 7 feet in an effort to make it flow. The Humble Oil & Refining Co. recently farmed out its leases in this area, due to the fact that it was edge acreage, and would be more economical to sublease than drill and operate the lease itself. Several other companies have been farming out such leases to save drilling and operation expenses, and the trouble of coping with salt water disposal problems which will eventually present themselves.

R. H. Vice's No. 1 Neal Cooper in the T. J. Moore Survey, a short distance east of production on the eastern edge of the Joiner area, Rusk County, fails to flow at a total depth of 3,797 feet. It is now swabbing and will be put on the pump in an effort to make it produce its daily allowable of 50 bbls.

Water Report

The latest water report compiled by engineers of the Railroad Commission show 106 wells making water in the field. Several wells have recently been plugged back to shut off salt water while several newly completed wells have come in showing water, or started showing water soon after their completion.

Geologists and petroleum engineers in the field estimate the gas area in the southern end of the field, southern Rusk County, to contain in the neighborhood of 5,000 acres. There are now five gas producers in this area: Sinclair Prairie Oil Co.'s No. 1 Ashby, which is producing 3,000,000 feet per day; the same company's No. 1 Fletcher, which is shut in; Stanolind Oil & Gas Co. and Pure Oil Co.'s No. 1 Lacy, which is producing from 1,500,000 to 3,000,000 feet per day; Peyton Brothers' No. 1 Perry which is producing 10,000,000 feet per day for drip gasoline, and Womack Oil Co.'s No. 1 Arnold, which is shut down. The Sinclair Prairie Oil Co. constructed several miles of line to carry gas from its own wells to its leases, and other company leases to the north in the field, gas being used and sold for drilling and production purposes on these leases.

Wildcatting in Other Counties

Burnham, Robison and Greer's No. 1 F. O. Weiss, located in the J. Dean Survey, northwestern Bowie County, encountered salt water and a slight showing of oil at 3,300-05 feet, total depth, and will probably be abandoned at this depth.

De Berry, Orr and Newsome are trying to assemble a block southwest of Burkhalter's No. 1 Staggers near the town of Cason in Morris County and will drill a Woodbine test.

C. M. Joiner and others are taking a 6,000-acre block centering in the Galloway Davis, Jackson Smith, T. P. Camp and George S. Park Surveys, 14 miles north of Clarksville in Red River County. A test will be drilled on the block.

Gus Peacock of Mineola has taken 3,500 acres along the Sabine River near the town of Mineola in Wood County, and is trying to obtain 1,500 acres more. A test will be started on the block by September 15, if the block is completed by that time.

COMPLETIONS IN EAST TEXAS

Cherokee County

Patton-Oliver and Murray's No. 1 Eddie Toole, dry and abandoned, total depth 2,756 feet. Doctor Tubbs and others' No. 1 J. H. Sharp, top sand 3,721 feet, initial production 80 bbls. in one-half hour through open tubing, total depth 3,722 feet.

North Gregg County

Adams and Lyle's No. 4 T. Anderson, top sand 3,485 feet, initial production 82 bbls. per hour through three-fourths-inch tubing choke, total depth 3,498 feet. Alco Royalty Co.'s No. 3 Johnson, top sand 3,607 feet, initial production 120 bbls. per hour through open 2-inch tubing, total depth 3,617 feet. Alma Petroleum Co.'s No. 2 E. W. Gray, top sand 3,661 feet, initial production 51 bbls. in 34 minutes through three-fourths-inch tubing choke, total depth 3,689 feet. Amerada Petroleum Corp.'s No. 6 E. Burnside, top sand 3,534 feet, initial production 83 bbls. per hour through three-fourths-inch tubing choke, total depth 3,563 feet; No. 1 S. G. Smith, top sand 3,555 feet, initial production 50 bbls. per hour through three-fourths-inch tubing choke, total depth 3,570 feet.

Arkansas Fuel Oil Co.'s No. 2 Burnside, top sand 3,465 feet, initial production 88 bbls. per hour through three-fourths-inch tubing choke, total depth 3,490 feet; No. 5 W. L. Hestland, top sand 3,608 feet, initial production 27 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,628 feet; No

3-C McKinley, top sand 3,500 feet, initial production 41 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,615 feet. Atlantic Oil & Production Co.'s No. 4 S. S. Barton, top sand 3,670 feet, initial production 16 bbls. per hour through tapered tubing, total depth 3,700 feet. Atlantic and Wadley's No. 4 Bander, top sand 3,599 feet, initial production 16 bbls. per hour through tapered tubing, total depth 3,603 feet.

Atlantic Oil & Producing Co.'s No. 1 J. C. Judge, top sand 3,497 feet, initial production 22 bbls. per hour through tapered tubing, total depth 3,522 feet; No. 3 Judge, top sand 3,492 feet, initial production 34 bbls. per hour through tapered tubing, total depth 3,517 feet; No. 15 Judge, top sand 3,503 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,529 feet. Atlantic and Wadley's No. 5 T. W. Lee, top sand 3,597 feet, initial production 22 bbls. per hour through tapered tubing, total depth 3,647 feet. Atlantic Oil & Production Co.'s No. 10 O. Moore, top sand 3,500 feet, initial production 32 bbls. per hour through tapered tubing, total depth 3,518 feet; No. 13 O. Moore, top sand 3,516 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,539 feet; No. 14 O. Moore, top sand 3,507 feet, initial production 33 bbls. per hour through tapered tubing, total depth 3,526 feet; No. 6 H. Pritchard, top sand 3,497 feet, initial production 21 bbls. per hour through tapered tubing, total depth 3,525 feet.

Atlantic and Sun Oil Co.'s No. 15 Hays, top sand 3,530 feet, initial production 21 bbls. per hour through tapered tubing, total depth 3,560 feet. Atlantic and Wadley's No. 10 M. Turner, top sand 3,579 feet, initial production 22 bbls. per hour through tapered tubing, total depth 3,633 feet. Atlantic and Sun Oil Co.'s No. 6-C R. C. Barnwell, top sand 3,480 feet, initial production 34 bbls. per hour through tapered tubing, total depth 3,519 feet. J. B. Bond and others' No. 2 J. H. Alexander, top sand 3,550 feet, initial production 17 bbls. in 10 minutes through three-fourths-inch tubing choke, total depth 3,555 feet. Byrd-Frost, Inc.'s No. 2 S. E. Adams, top sand 3,590 feet, initial production 65 bbls. in one-half hour through open tubing, total depth 3,635 feet. Cranfill and Reynolds' No. 5 Remberts, top sand 3,474 feet, initial production 85 bbls. per hour through three-fourths-inch tubing choke, total depth 3,500 feet.

Deep Rock Oil Co.'s No. 6 H. Pritchard, top sand 3,505 feet, initial production 45 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,560 feet. Delaney and others' No. 2 H. Clemens, top sand 3,640 feet, initial production 30 bbls. in one-fourth hour through 1½-inch tubing choke, total depth 3,661 feet. East Texas Refining Co.'s No. 3 P. C. Castleberry, top sand 3,569 feet, initial production 80 bbls. per hour through 1-inch tubing choke, total depth 3,609 feet; No. 5 L. White, top sand 3,577 feet, initial production 30 bbls. in one-fourth hour through open tubing, total depth 3,606 feet. Export Petroleum Corp.'s No. 1 Arnold, top sand 3,631 feet, initial production 40 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,652 feet. Empire Gas & Fuel Oil Co.'s No. 4 J. T. Jeter, top sand 3,580 feet, initial production 43 bbls. in one-fourth hour through 2½-inch tubing choke, total depth 3,602 feet.

Gulf Production Co.'s No. 4 Barker, top sand 3,582 feet, initial production 80 bbls. per hour through three-fourths-inch tubing choke, total depth 3,592 feet; No. 7 Bozeman, top sand 3,547 feet, initial production 75 bbls. per hour through three-fourths-inch tubing choke, total depth 3,593 feet; No. 8 Bozeman, top sand 3,585 feet, initial production 76 bbls. per hour through three-fourths-inch tubing choke, total depth 3,624 feet; No. 7 M. O. Sheppard, top sand 3,484 feet, initial production 80 bbls. per hour through three-fourths-inch tubing choke, total depth 3,511 feet. Iowa-Payne Oil Co.'s No. 1 Akins, top sand 3,529 feet, initial production 22 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,612 feet. J. C. Little and others' No. 3 Elmyra Church, top sand 3,588 feet, initial production 20 bbls. in one-fourth hour through tubing choke, total depth 3,611 feet. Lucey Petroleum Co.'s No. 2 B. C. Christian, top sand 3,578 feet, initial production 127 bbls. per hour through three-fourths-inch tubing choke, total depth 3,620 feet.

Margay Oil Co.'s No. 3 T. C. Christian, top sand 3,649 feet, initial production 44 bbls. in one-half hour through three-fourths-inch tubing choke, total depth 3,665 feet. Magnolia Petroleum Co.'s No. 6 Foster, top sand 3,588 feet, initial production 130 bbls. per hour through 2-inch open tubing, total depth 3,618 feet; No. 4 T. B. Stinchcomb, top sand 3,550 feet, initial production 140 bbls. per hour through open tubing, total depth 3,570 feet; No. 2 H. B. Zeigler, top sand 3,450 feet, initial production 132 bbls. per hour through open tubing, total depth 3,470 feet. Marine Production Co.'s No. 1 G. W. Richey, top sand 3,549 feet, initial production 35 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,637 feet. Miller and Ray's No. 3 F. Jones, top sand 3,535 feet, initial production 37 bbls. in one-fourth hour through open tubing, total depth 3,565 feet. Pilot Oil Co.'s No. 2 P. McGeorge, top sand 3,484 feet, initial production 25 bbls. in one-fourth hour through open tubing, total depth 3,505 feet. Prince Brothers' No. 3 Williams, top sand 3,604 feet, initial production 95 bbls. per hour through 1-inch tubing choke, total depth 3,634 feet.

Roeser and Pendleton's No. 3-B W. R. Nicholson, top sand 3,607 feet, initial production 90 bbls. per hour through open 2-inch tubing, total depth 3,620 feet. Selby Oil & Gas Co.'s No. 12-B Snavely heirs, top sand 3,553 feet, initial production 40 bbls. in one-fourth hour through 2-inch open tubing, total depth 3,582 feet. Shell Petroleum Corp.'s No. 2 O. Lockett, top sand 3,583 feet, initial production 10 bbls. in one-half hour through tapered tubing, total depth 3,633 feet; No. 4 J. Moore, top sand 3,536 feet, initial production 21 bbls. per hour through tapered tubing, total depth 3,558 feet. Showers and Moncrief's No. 1 M. O. Sheppard, top sand 3,522 feet, initial production 75 bbls. per hour through three-fourths-inch tubing choke, total depth 3,547 feet. Simms and Russ' No. 5 J. J. Flewellen, top sand 3,655 feet, initial production 180 bbls. per hour through open 2-inch tubing, total depth 3,665 feet. Sun Oil Co.'s No. 1 J. N. Campbell, top sand 3,504 feet, initial production 120 bbls. per hour through open 2-inch tubing, total depth 3,557 feet. Tidal Oil Co.'s No. 4 Christian, top sand 3,585 feet, initial production 14 bbls. in 10 minutes through 2-inch open tubing, total depth 3,644 feet.

Washing Oil Co.'s No. 2 W. Cobb, top sand 3,496 feet, initial production 120 bbls. per hour through 1-inch tubing choke, total depth 3,556 feet. Yount Lee Oil Co.'s No. 5 M. Jones, top sand 3,547 feet, initial production 84 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,567 feet; No. 4 B. Rodden, top sand 3,550 feet, initial production 76 bbls. per hour through eleven-sixteenths-inch tubing choke, total depth 3,562 feet.

South Gregg County

Arkansas Fuel Oil Co.'s No. 4 C. Brown, top sand 3,565 feet, initial production 75 bbls. per hour through 1-inch tubing choke, total depth 3,590 feet; No. 3 Huey-Ross, top sand 3,555 feet, initial production 50 bbls. per hour through 1-inch tubing choke, total depth 3,582 feet. Brown and others' No. 1 J. S. and F. Elder, location abandoned. Danciger Oil & Refining Co.'s No. 3 N. C. McNeeley, top sand 3,642 feet, initial production 51 bbls. per day pinched, total depth 3,649 feet. East Texas Refining Co.'s No. 2 E. Mitchell, top sand 3,564 feet, initial production 75 bbls. per hour through three-fourths-inch tubing choke, total depth 3,601 feet.

Gulf Production Co.'s No. 11 Alexandria, top sand 3,538 feet, initial production 80 bbls. per hour through three-fourths-inch tubing choke, total depth 3,558 feet; No. 12 H. C. Alexandria, top sand 3,536 feet, initial production 87 bbls. per hour through three-fourths-inch tubing choke, total depth 3,556 feet; No. 11 C. Brown, top sand 3,492 feet, initial production 93 bbls. per hour through three-fourths-inch tubing choke, total depth 3,507 feet; No. 1 J. Clayborn, top sand 3,629 feet, initial production 65 bbls. per hour through three-fourths-inch tubing choke, total depth 3,630 feet; No. 3 O. Davis, top sand 3,562 feet, initial production 65 bbls. per hour through three-fourths-inch tubing choke, total depth 3,571 feet; No. 27 S. Hilburn, top sand 3,547 feet, initial production 88 bbls. per hour through three-fourths-inch tubing, total depth 3,562 feet.

Jones and O'Brien's No. 1 Prothro, top sand 3,640 feet, initial production 19 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,646 feet. Jones and O'Brien's (formerly J. C. O'Brien) No. 1-H H. Clayborn, top sand 3,697 feet, initial production 155 bbls. in 40 minutes through three-fourths-inch tubing choke, total depth 3,705 feet. Louisiana Oil & Refining Co.'s No. 4 W. C. Griffin, top sand 3,577 feet, initial production 75 bbls. per hour through 1-inch tubing choke, total depth 3,604 feet. Magnolia Petroleum Co.'s No. 3 Nancy Radford, top sand 3,636 feet, initial production 132 bbls. per hour through 1-inch tubing, total depth 3,642 feet. Mission Oil Co.'s No. 4 Clayborn, top sand 3,692 feet, initial production 25 bbls. in one-fourth hour through open tubing, total depth 3,695 feet. Mullendore and Berry's No. 2 A. Spear, top sand 3,546 feet, initial production 30 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,565 feet.

Rajo Oil Corp.'s No. 3 Mrs. A. C. McCormick, top sand 3,735 feet, initial production 63 bbls. per hour through three-fourths-inch tubing choke, total depth 3,755 feet. Selby Oil & Gas Co. and Lewis Production Co.'s No. 3 M. T. Cole, top sand 3,532 feet, initial production 37 bbls. in one-fourth hour through open tubing, total depth 3,562 feet. Sells Petroleum Co.'s No. 2 Williams, top sand 3,639 feet, initial production 51 bbls. per day pinched, total depth 3,651 feet. Shell Petroleum Corp.'s No. 5 D. M. Bates, top sand 3,525 feet, initial production 14 bbls. in one-half hour through tapered tubing, total depth 3,586 feet; No. 4 Nellie Jobe, top sand 3,506 feet, initial production 15 bbls. in one-half hour through open tubing, total depth 3,580 feet.

Sinclair Prairie Oil Co.'s No. 11 S. G. Andrews, top sand 3,455 feet, initial production 30 bbls. in one-fourth hour through open tubing, total depth 3,490 feet; No. 26 M. T. Cole, top sand 3,594 feet, initial production 110 bbls. per hour through open tubing, total depth 3,596 feet; No. 28 M. T. Cole, top sand 3,577 feet, initial production 100 bbls. per hour through open tubing, total depth 3,580 feet; No. 29 M. T. Cole, top sand 3,591 feet, initial production 50 bbls. per hour through tubing, total depth 3,594 feet; No. 7-B A. A. King, top sand 3,437 feet, initial production 45 bbls. in one-fourth hour through open tubing, total depth 3,472 feet; No. 2-B A. A. King, top sand 3,438 feet, initial production 40 bbls. in one-fourth hour through open tubing, total depth 3,465 feet; No. 3-B A. A. King, top sand 3,415 feet, initial production 28 bbls. in one-fourth hour through open tubing, total depth 3,455 feet; No. 7-B A. A. King, top sand 3,435 feet, initial production 25 bbls. in one-fourth hour through open tubing, total depth 3,465 feet; No. 9 Joe E. Lawther, top sand 3,550 feet, initial production swabbed 40 bbls. in four hours, total depth 3,593 feet.

Smith and Merwinkle's No. 1 Jim Gray, top sand 3,691 feet, initial production 51 bbls. per day pinched, total depth 3,699 feet. Stanolind Oil & Gas Co.'s No. 2-B E. L. Walker, top sand 3,559 feet, initial production 110 bbls. per hour through 1½-inch tubing choke, total depth 3,564 feet. The Texas Company's No. 5 J. M. Dickson, top sand 3,566 feet, initial production 105 bbls. per hour through open tubing, total depth 3,622 feet; No. 3 S. D. Walker, top sand 3,565 feet, initial production 90 bbls. per hour through open tubing, total depth 3,575 feet. Tidal Oil Co.'s No. 8 King, top sand 3,545 feet, initial production 84 bbls. per hour through open tubing, total depth 3,591 feet. Welch and Sandler's No. 4 Barnett, top sand 3,736 feet, initial production 150 bbls. per hour through open tubing, total depth 3,738 feet. Whee-

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East Central Texas Wildcats

Week Ending July 4

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
Roeser and Pendleton's No. 1 M. A. Davy, 660 ft. from N line and center of E and W lines of tract and survey, P. G. Adams Sur.	Derrick.
C. R. Wilmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in 8¼ of 139-ac. tract, M. Main Sur.	T.D. 1,538 ft.

ANGELINA COUNTY

French et al's No. 1 Abney, 150 ft. from S line and 300 ft. from W line of lease, Antasio Barsta Sur.	Drlg. 1,344 ft.

BOWIE COUNTY

Burnham-Robertson and Greer's No. 1 F. O. Weiss, 850 ft. from N line and 240 ft. from W line of B. H. Williams 50-ac. tract, Jessie Dean Sur.	T.D. 3,305 ft.; prepare to make drill stem test.
Les Timberlake's No. 1 C. E. McElwee, 250 ft. from S line and 450 ft. from W line of 160-ac. tract, M. A. Poer Sur.	Dry and abnd. 3,450 ft.

CHEROKEE COUNTY

Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	S.D. 1,000 ft.
T. J. Carter et al's No. 1 Annie Kelley, 1,714 ft. S and 330 ft. W of NW cor. of Pilot Oil Co.'s Kelley 10-ac. lease, M. De Los Santos Coy Sur.	Swabbed 100 pct salt water; top sand 3,762 ft.
W. C. Hamilton et al's No. 1 Doctor Jones, 150 ft. from N line and 1,000 ft. from E line of 132-ac. lease, 4 miles SE of Summerfield, J. D. Hamilton Sur.	Location.
Mid-Kansas Oil & Gas Co.'s No. 2 H. D. Kelley, 330 ft. from S line and 1,215 ft. from E line of 56.3-ac. tract, M. De Los Santos Coy Sur.	Derrick.
Patton-Oliver and Murray's No. 1-A Eddie Toole, skidded derrick 20 ft. W of No. 1 Toole, M.D.L.S. Coy Sur.	Derrick.
Pilot Oil Co.'s No. 1 Annie Kelley, center of 10-ac. lease, M. De Los Santos Coy Sur.	Top sand 3,679 ft.; T.D. 3,686 ft.
Rayburn and Glassco's No. 1 Annie Kelley, 1,714 ft. S and 2,210 ft. W of NW cor. of Pilot Oil Co.'s Kelley 10-ac. lease, M. De Los Santos Coy Sur.	Derrick.
William A. Stone's No. 1 J. T. Perkins, 200 ft. from NW cor. of lease, Thomas Stanford Sur., 8 miles S of Ponta	S.D. 2,250 ft.; (corrected).
Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur.	Drlg. 2,000 ft.

DELTA COUNTY

Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 52-ac. tract, E. Chick Sur.	S.D. 3,733 ft.
Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 275-ac. tract, Dunnetelle Sur.	Drlg. 2,340 ft.

ELLIS COUNTY

Armstrong's No. 1 Milton Cook, SE cor. of 50-ac. tract, S. Frederick Sur.	S.D. 215 ft.
Armstrong Bros.' No. 1 Reeves	Waiting on cmt. to set 100 ft.

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Southern Ward County Completes Its Largest Well Flowing 680 Barrels in 19 Hours

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 4.—The acreage and four producers in the Deep Rock area, Andrews County, which were held by the Atlantic Oil Producing Co. and the California Co., has been sold to J. W. Tripplehorn, operator at Fort Worth, for $7,000 in cash. He will work over the wells in an effort to increase production from the present combined daily average of from 200 to 300 bbls., but if this proves unsuccessful he will move off the material and equipment for use in other fields, probably the Panhandle, where Mr. Tripplehorn and his brother, D. R. Tripplehorn, have holdings. They purchased another 160 acres in that district this week from the Stanolind Oil & Gas Co. and will drill a test immediately on the NW of Section 57, Block B-2, H.&G.N. Survey, Gray County.

The Deep Rock area was opened by the Deep Rock Oil Co. in its No. 1 Ogden, Section 6, Block A-46, P.S.L. Survey, December, 1929. The well was completed at a total depth of 4,428 feet, the pay logged from 4,345-58 feet, and initial production 200 bbls., 8 per cent water and 16 per cent basic sediment, coming from 4,414-28 feet. The gravity of the oil is 28 degrees and has a high sulphur content, which made it unpopular with crude oil purchasing companies. A pipe line has never been connected with the area, although the Atlantic Pipe Line Co. has an 8-inch running near the wells. There are 25,000 bbls. of oil in storage, which was included in the sale to Mr. Tripplehorn.

Southern Ward's Largest

Texas Pacific Coal & Oil Co.'s No. 3 Henry James has been completed for the largest producer of southern Ward County, outstripping Eastland Oil Co.'s No. 1 Weiss, which was recently completed for the largest well in the area. The Henry Jones well flowed 680 bbls. in 19 hours through 1-inch choke against 325 pounds pressure, from big pay logged at 2,318-20 feet. It also was making 3,000,000 feet of gas with the oil when it encountered the increase in oil pay, the gas coming from 2,218 feet. The well is in Section 5, Block 34, H.&T.C. Survey,, near the former record holder of the Eastland Oil Co.

Stanolind Oil & Gas Co.'s No. 1 Williams, Ordovician test, which was shut down in March by fire on the derrick floor, is operating again, pulling pipe which was left sticking in the hole after the fire. Total depth is 7,420 feet.

Irion County Leases

West Texas representatives of the Mid-Kansas Oil & Gas Co. have received instructions to lease 900 acres in the John Sherry, J. H. Brunson and L. C. Ferguson Surveys in the northeast corner of Irion County. Ten-year leases are to be obtained. Such action on the part of a major producer would lead one to believe that the acreage might be leased for an Ordovician test. The company is interested in an Ordovician test now drilling in north central Crockett County on the Todd ranch. It is also drilling a test in Coke County near a former test which obtained good showings of oil, but was finally abandoned.

Garza County

Penny and Posey's No. 1 Justice, wildcat test in Section 25, Block 6, H.&G.N. Survey, Garza County, was abandoned during the past week at a total depth of 3,330 feet, corrected. Another wildcat test is preparing to spud in the county, and will be carried on the West Texas drilling report.

Wilson and Davis of Fort Stockton have made a location in the southeast quarter of Section 31, Block 16, University Lands, in the Taylor-Link Pool, Pecos County. This will be the first well drilled in this pool for over a year. The pool is located about 15 miles west of the famous Yates Field.

Defends Yates Allowable

R. H. Morrison, manager of the southern division of the California Co., which is one of the large lease holders in the Yates Field, published a letter this week which in part reads as follows:

"Competent engineers who have studied the situation estimate the recoverable reserves at Yates at 500,000,000 to 700,000,000 bbls. Likewise, I think 1,500,000,000 bbls. is generally accepted as a liberal estimate of the recoverable reserves from the East Texas Fields. In other words, East Texas had recoverable reserves three times as great as Yates, but the present East Texas allowable of 325,000 bbls. per day is five times as great as the Yates allowable of 65,000 bbls. per day. It follows that Yates, with estimated reserves one-third as large as the estimated East Texas reserves, should be allowed to produce one-third as much as the 325,000 bbls. allowed East Texas if real equity is desired. This would give Yates an allowable of 108,000 bbls. per day. The oil outlet could be increased to 105,000 bbls. per day with no increase in the rate of reservoir pressure decline, which was an average of only 8 pounds per month during the past six months. This clearly shows that Yates could produce substantially in excess of 105,000 bbls. per day without causing physical waste."

Mr. Morrison went on to point out the difference in drilling and producing the two fields, the Yates Field having only 400 wells which are prorated on an acreage-potential basis whereas the East Texas Field has over 6,500 wells and is produced on the per well basis. If the Yates Field was prorated like the East Texas Field it would force the drilling of many unnecessary wells, and the stability of the industry would be imperiled by duplicating the East Texas conditions and forcing the Yates operators to cry for more oil per well so they could get adequate return on their investment.

The letter defends the present Yates Field allowable as conservative and contends that greater production should be permitted from the Pecos County Field if true equity with East Texas was the only question involved.

Glasscock Abandonment

B. C. Mann and Currie Brothers' No. 1 fee in Section 27, Block 34, Township 3s, T.&P.R.R. Survey, Glasscock County, was another wildcat abandoned this week. This makes the third wildcat abandoned in the county in the last few weeks.

Western Ward Showing

The Plains Producing Co.'s No. 1 Benton Land Co., located 1½ miles north of the company's No. 1 Monroe, the discovery well of western Ward County, was reported to have had a showing of oil from 2,430-45 feet, but is drilling to test the Delaware horizon which the first producer logged at around 4,670 feet. The second test is located in Section 26, Block 1, W.&N.W. Survey.

Atlantic Oil Producing Co. and Rector and Lyles have made location for their No. 1 Majors in Section 62, Block 32, H.&T.C. Survey, approximately 3 miles northwest of the discovery well of this section of Ward County. Due to the fact that it is on the trend between the Monroe discovery well and the Loving County Field, 13 miles northwest, makes it an exceptionally interesting test.

Potentials

Potential of the Winkler County Field is 90,574 bbls. from 485 wells with daily allowable still 35,000 bbls.

Potential of the Crane-Upton districts for the period July 1 to August 1, is 55,408 bbls. from 598 wells. Total daily allowable remains the same, 16,700 bbls.

Potential of the Yates Field, Pecos County, on a 12-hour gauge, is 2,317,997 bbls. from 400 wells. Daily allowance is 65,000 bbls. A hearing for this field will be held in Austin on July 11 along with several other field hearings.

WICHITA FALLS DISTRICT

The Lamont area in southeast Archer County, which was opened about three weeks ago by the Lamont Drilling Co., is apparently defined to the south, southeast and southwest, production still being procured to the north. The company's No. 3 Pruett, the farthest north well in the field, is estimated good for 300 bbls. per day, or similar to the company's Nos. 1 and 2 wells. These wells are producing from a sand logged around 690 feet.

The Fain & McGaha area, Archer County, opened the fore part of June of this year, has been extended 1,500 feet east by the Petroleum Producers Co.'s No. 1 J. W. Campbell, flowing an initial production of 96 bbls. from oil sand logged from 1,786-88 feet, no water. The field is now three-quarters of a mile long from northwest to southeast.

A. Z. Kouri and others' No. 1 J. P. Montgomery, 2 miles northwest of Archer City and 1½ miles east of the Thomas Pool, Archer County, which was mentioned last week having the possibilities of making a small shallow pool discovery, is estimated good for around 40 bbls. per day from top of Archer pay horizon above the Gunsight lime, 1,120-24 feet. The owners tried to flow the well, but failing in this ran rods and tubing to put on the pump.

The Deep Oil Development Co. has made location for its No. 1 Crawford-Plowman in the SW cor. of Block 16, H. Corzine Survey, 1 mile southeast of the nearest Canyon production in the Chalk Hill area, Archer County. It is to be a 2,300-foot Canyon series test.

Bridwell Oil Co.'s No. 1 Annie P. Jackson, 1 mile northwest of Canyon production in the Chalk Hill area, missed logging oil saturation in the Canyon pay horizon, and is now standardizing to drill to 3,600 feet to the Strawn horizon.

Falls Refining Co.'s No. 1 L. F. Wilson, which was brought in two weeks ago extending the Canyon pay horizon for another 2,100 feet, has been cored to 2,222 feet with no increase in oil or gas, but started showing water. It will be plugged back to produce as a pumper from the former depth of 2,215 feet.

Dewey Knox of Graham has purchased leases on all of the B. Mosely Survey, Abstract 1,338, and all of the G. W. Parker Survey, Abstract 1,513, in south Young County, comprising approximately 450 acres, and will drill a 3,600-foot test immediately.

PANHANDLE DISTRICT

Devore and Robinson's No. 1 G. W. Sitter in Section 33, Block 24, H.&G.N. Survey, Wheeler County, is standing with 1,000 feet of oil in the hole at 2,760 feet, after encountering an increase in oil from 2,745-47 feet. The well was formerly completed as a gasser, but the gas was cased off with 6⅝-inch pipe at 2,409 feet, and the well drilled deeper. It is located in a gas area, but will probably lead to further drilling in the area to test the oil horizon below the gas strata. Many of the gas producers may also be drilled deeper in an effort to make oil producers out of them. This well has a tendency to flow. It formerly made 80,000,000 feet of gas from 2,193-2,263 feet.

Humble Oil & Refining Co. has abandoned its No. 1 Adair in Section 7, Block H, Kelley Survey, Briscoe County. This was a wildcat test planned on drilling to 5,000 feet, but the company deemed 4,010 feet a sufficient depth to test the formation desired. Elevation is 2,620 feet.

Production in the Panhandle district decreased around 1,590 bbls. per day during the week, Gray County showing the greatest decline, or 1,175 bbls. All other counties, with the exception of Moore County, shared in the decline.

Wildcat Operations in West Texas

Week Ending July 4

BORDEN COUNTY

Company, well, farm name, section and block— Remarks—

Westyde Investment Co.'s No. 1 Looney, 990 ft. from S and E, Sec. 15, Blk. 31, Twp. 4n. T.&P. Sur. ..... Drlg. 250 ft.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur. ..... S.D. 1,935 ft.

E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur. ..... S.D. 1,302 ft.

Joiner's No. 1 McIntire, 853 ft. from S and 2,390 ft. from E, Sec. 21, Blk. 352, W. J. Mitchell Sur. ..... Rig.

Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 18, Blk. G-14, G.C.& S.F. Sur. ..... S.D. 2,900 ft.

Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 352, 7 miles south Alpine ..... S.D. 1,750 ft.

CONCHO COUNTY

Beesley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 103, T.&N.O. Sur. ..... S.D. 1,700 ft.

CRANE COUNTY

Continental Oil Co.'s No. 1-D Cowden, 200 ft. from S and 2,492 ft. from E Sec. 18, Blk. X ..... T.D. 2,482 ft.; S.D. for proration gauge.

CROCKETT COUNTY

California Co.'s No. 1 O'Byrne, 2,310 ft. from S and 1,650 ft. from E, Sec. 23, Blk. 33, Twp. 2s, T.&P. Sur... Rigging up.

Doleman & Moore's No. 1 Ferner, 3,135 ft. from N and 1,485 ft. from E of Sec. 34, Blk. 2, I.&G.N. Sur. ..... Spudded and S D.

Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur. ..... Drlg. 125 ft.

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East Texas Fields

(Continued from Page 37)

lock and Collins' No. 5 Clayton heirs, top sand 3,530 feet, initial production 22 bbls. per hour through open tubing, total depth 3,553 feet. Winston Oil Co.'s No. 7 P. Jones, top sand 3,720 feet, initial production 60 bbls. in 40 minutes through 1-inch tubing choke, total depth 3,723 feet. Zion Oil Co.'s No. 1 Barnett, abandoned, total depth 3,751 feet, top sand 3,750 feet.

North Rusk County

Gulf Production Co.'s No. 3-A Henry Sexton, top sand 3,606 feet, initial production 25 bbls. per hour through three-fourths-inch tubing choke, total depth 3,687 feet. Humble Oil & Refining Co.'s No. 7-B H. Sexton, top sand 3,619 feet, initial production 49 bbls. in one-half hour through three-fourths-inch tubing choke, total depth 3,680 feet. Louisiana Oil & Refining Co.'s No. 7 Jernigan, top sand 3,620 feet, initial production 50 bbls. per hour through three-fourths-inch tubing choke, total depth 3,646 feet. Shell Petroleum Corp.'s No. 6 Spivey, top sand 3,651 feet, initial production 15 bbls. in one-half hour through open tapered tubing, total depth 3,732 feet.

South Rusk County

T. C. Adams' No. 3 Arnold, top sand 3,653 feet, initial production 65 bbls. per hour through open tubing, total depth 3,693 feet. Adams and Lyle's No. 1 Allen Kersh, top sand 3,630 feet, initial production 51 bbls. in 45 minutes through open tubing, total depth 3,634 feet. Blackwell Oil & Gas Co.'s No. 6 W. P. Moore, top sand 3,624 feet, initial production 50 bbls. in one-half hour through open 2-inch tubing, total depth 3,645 feet. Combined Oil Interests' No. 8 G. W. Eaton, top sand, 3,722 feet, initial production 25 bbls. in one-fourth hour through three-fourths-inch tubing choke, total depth 3,739 feet. East Shore Oil Co.'s No. 4 Fox, top sand 3,672 feet, initial production 32 bbls. in one-fourth hour through open tubing, total depth 3,686 feet.

Texas State Oil Co.'s No. 1 F. J. Cox, top sand 3,628 feet, initial production 15 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,740 feet. Golding and Murchinson's No. 9 Ida L. Kinney, top sand 3,570 feet, initial production 16 bbls. in one-fourth hour through three-fourths-inch tubing choke, total depth 3,645 feet; No. 10 Ida L. Kinney, top sand 3,570 feet, initial production 10 bbls. in one-half hour through three-fourths-inch tubing choke, total depth 3,645 feet. Gulf Production Co.'s No. 4 H. Johnson, top sand 3,791 feet, initial production 68 bbls. per hour through three-fourths-inch tubing choke, total depth 3,797 feet; No. 11 Turner, top sand 3,730 feet, initial production 100 bbls. per hour through three-fourths-inch tubing choke, total depth 3,738 feet; No. 12 G. G. Turner, top sand 3,734 feet, initial production 65 bbls. per hour through three-quarters-inch tubing choke, total depth 3,754 feet.

Hoosier and others' No. 2-B Eaton, top sand 3,748 feet, initial production 50 bbls. per hour through 2-inch tubing choke, total depth 3,760 feet. John W. Hoosier's No. 3 L. I. Jones, top sand 3,772 feet, initial production 150 bbls. per hour through open 2-inch tubing, total depth 3,790 feet. Humble Oil & Refining Co.'s No. 6 J. R. Box, top sand 3,685 feet, initial production 49 bbls. in one-half hour through three-fourths-inch tubing choke, total depth 3,758 feet; No. 7 J. R. Box, top sand 3,750 feet, initial production 48 bbls. in one-half hour through three-fourths-inch tubing choke, total depth 3,788 feet; No. 5 J. E. B. Sneed, top sand 3,693 feet, initial production 41 bbls. in one-half hour through three-fourths-inch tubing choke, total depth 3,713 feet; No. 10 J. W. Turner, top sand 3,704 feet, initial production 49 bbls. per hour through three-fourths-inch tubing choke, total depth 3,800 feet.

Hunt Production Co.'s No. 5-B Bradford, top sand 3,540 feet, initial production 50 bbls. in three hours pumping, total depth 3,684 feet. Mitchum and others' No. 3-C Joe Lee, top sand 3,781 feet, initial production 51 bbls. in 45 minutes through three-fourths-inch tubing choke, total depth 3,784 feet. H. L. Hunt's No. 7-A H. C. Mitchell, top sand 3,749 feet, initial production 150 bbls. per hour through open 2-inch tubing choke, total depth 3,784 feet. Lucey Petroleum Co.'s No. 2-B B. F. Maxwell, top sand 3,642 feet, initial production 15 bbls. in one-fourth hour through 1-inch tubing choke, total depth 3,714 feet. Friedman and Dorfman's No. 1 J. H. Stewart, top sand 3,701 feet, initial production 65 bbls. in one-half hour through open tubing, total depth 3,707 feet.

McMurray and others' No. 3 Fair, dry and abandoned, total depth 3,280 feet. J. E. Mabee's No. 3 Wilson, top sand 3,622 feet, initial production 42 bbls. in 10 minutes through open 2½-inch tubing choke, total depth 3,632 feet. Joe Marr Drilling Co.'s No. 1 Tom Lacy, temporarily abandoned, total depth 3,706 feet, top sand 3,703 feet.

Mid-Kansas Oil & Gas Co.'s No. 7 Cora L. Graham, top sand 3,636 feet, initial production 108 bbls. per hour through open 2½-inch tubing choke, total depth 3,676 feet; No. 4 H. L. Griffin, top sand 3,632 feet, initial production 30 bbls. per hour through open 2½-inch tubing, total depth 3,696 feet; No. 5 W. T. Grissom, top sand 3,628 feet, initial production 88 bbls. per hour through open 2½-inch tubing, total depth 3,654 feet; No. 5 Joe Mills, top sand 3,661 feet, initial production 88 bbls. per hour through open 2½-inch tubing, total depth 3,759 feet; No. 2 G. W. Moore, top sand 3,598 feet, initial production 65 bbls. per hour through 2½-inch tubing, total depth 3,618 feet; No. 4 J. M. Price, top sand 3,641 feet, initial production 75 bbls. per hour through open 2½-inch tubing, total depth 3,667 feet; No. 3 M. A. Price, top sand 3,568 feet, initial production 108 bbls. per hour through open 2½-inch tubing, total depth 3,626 feet.

Mills-Bennett's No. 5 Pinkston, top sand 3,586 feet, initial production 20 bbls. in one-quarter hour through open tubing, total depth 3,650 feet. Moss and Urschel's No. 3 Deason, top sand 3,669 feet, initial production 40 bbls. per hour through 1½-inch tubing choke, total depth 3,770 feet. J. J. Mundy's No. 1 Wood, location abandoned. Navarro Oil Co.'s No. 2 Clayton Young, top sand 3,670 feet, initial production 75 bbls. per hour through three-quarters-inch tubing choke, total depth 3,695 feet. D. C. Roberts' No. 3 E. B. Alford, abandoned, total depth 3,100 feet. Sinclair Prairie Oil Co.'s No. 10 D. Ledbetter, top sand 3,620 feet, initial production 95 bbls. per hour through open tubing, total depth 3,659 feet; No. 4 W. H. McCord, top sand 3,577 feet, initial production 20 bbls. per hour through open 2-inch tubing, total depth 3,656 feet; No. 3 Peter Tipps, top sand 3,652 feet, initial production 60 bbls. in 20 minutes through open tubing, total depth 3,664 feet; No. 5-B Peter Tipps, top sand 3,653 feet, initial production 155 bbls. per hour through open tubing, total depth 3,664 feet.

Stanolind and Pure Oil Co's No. 5 R. J. Burton, top sand 3,630 feet, initial production 40 bbls. in one-quarter hour through open tubing, total depth 3,694 feet. W. L. Stearns' No. 1 Negro Church, top sand 3,615 feet, initial production 25 bbls. per hour through open tubing, total depth 3,685 feet. Sun Oil Co.'s No. 1 Alph Lee, top sand 3,643 feet, initial production 40 bbls. in three hours through 2-inch tubing, total depth 3,661 feet; No. 3 R. G. Mason, top sand 3,607 feet, initial production 40 bbls. per hour through open 2-inch tubing, total depth 3,634 feet.

The Texas Company's No. 7 First Guaranty State Bank, top sand 3,699 feet, initial production 100 bbls. per hour through open 2-inch tubing, total depth 3,743 feet. Texas Trading Co.'s No. 2 Deason, top sand 3,675 feet, initial production 80 bbls. per hour through open 2½-inch tubing, total depth 3,705 feet.

Smith County

Byers and others' No. 1 Cole, top sand 3,757 feet, initial production 150 bbls. per hour through open 2½-inch tubing, total depth 3,759 feet. K. O. T. Oil Co.'s No. 2 S. S. Cooke, top sand 3,749 feet, initial production 150 bbls. per hour through open 2½-inch tubing, total depth 3,758 feet. J. W. Smith's (Receiver) No. 1 Jessie Cole, top sand 3,737 feet, initial production 160 bbls. per hour through open tubing, total depth 3,740 feet. Robert S. Monroe's No. 1 Robinson, top sand 3,756 feet, initial production 75 bbls. in 20 minutes through open tubing, total depth 3,757 feet. Sinclair Prairie Oil Co.'s No. 14-A Jarvis, top sand 3,710 feet, initial production 25 bbls. in one-quarter hour through open 2½-inch tubing, total depth 3,714 feet; No. 14-C Jarvis, top sand 3,706 feet, initial production 45 bbls. in one-quarter hour through open tubing, total depth 3,712 feet.

Summitt Drilling Co.'s No. 2 Mayfield, top sand 3,825 feet, initial production 15 bbls. in 35 minutes through three-quarters-inch tubing choke, total depth 3,828 feet. Sun Oil Co.'s No. 9 J. D. Henson, top sand 3,701 feet, initial production 50 bbls. per hour through open tubing, total depth 3,707 feet. The Texas Company's No. 8-A Jarvis, top sand 3,620 feet, initial production 102 bbls. per hour through open 2-inch tubing, total depth 3,629 feet.

Upshur County

Cranfill & Reynolds and others' No. 2 R. Williams, top sand 3,655 feet, initial production 21 bbls. in one-quarter hour through open tubing, total depth 3,659 feet. Galvez Oil Co.'s No. 3 Moore heirs, top sand 3,720 feet, initial production 80 bbls. per hour through 1-inch tubing, total depth 3,725 feet. Humble Oil & Refining Co.'s No. 2 H. M. Reeves, location abandoned.

Magnolia Petroleum Co.'s No. 3 H. Fenton, top sand 3,710 feet, initial production 140 bbls. per hour through open tubing, total depth 3,722 feet; No. 8 Free, top sand 3,625 feet, initial production 144 bbls. per hour through open tubing, total depth 3,644 feet; No. 2 L. Graves, top sand 3,606 feet, initial production 110 bbls. per hour through open 2-inch tubing, total depth 3,612 feet. Mudge Oil Co.'s No. 1-B Richardson, top sand 3,730 feet, initial production 138 bbls. per hour through 2½-inch tubing, total depth 3,760 feet.

Simms and Stanolind Oil & Gas Co.'s No. 11-B J. J. Flewellen, top sand 3,757 feet, initial production 90 bbls. per hour through open 2-inch tubing, total depth 3,763 feet. Stanolind-Simms and Continental Oil Co.'s No. 8-A J. J. Flewellen, top sand 3,635 feet, initial production 68 bbls. per hour through 1½-inch tubing, total depth 3,648 feet. Twin Oil Co.'s No. 1 Bonner, top sand 3,648 feet, initial production 110 bbls. per hour through open tubing, total depth 3,655 feet.

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ended July 2 follows:

	Bbls.
WYOMING	
Salt Creek	23,130
Big Muddy	1,650
Badger Basin	50
Byron-Garland	40
Dallas Derby	580
Dutton Creek	70
Elk Basin	590
Ferris	20
Frannie	30
Grass Creek	1,280
Greybull	0
Hamilton Dome	930
Hudson	380
La Barge	1,100
Lance Creek	180
Lost Soldier	2,690
Mule Creek	...
Midway	190
Notches	...
Oregon Basin	...
Osage	950
Pilot Butte	40
Rex Lake	...
Rock River	1,190
South Casper	...
Poison Spider	90
Teapot	20
Warm Springs	0
Total Wyoming	35,200
MONTANA	
Buckley-Border	640
Cat Creek	880
Dry Creek	800
Kevin-Sunburst	3,340
Lake Basin	60
Pondera	1,480
Total Montana	7,200
COLORADO	
Florence	250
Fort Collins and Wellington	830
Iles Dome	580
Moffat	590
Orchard	270
Rangely	90
Tow Creek	260
Total Colorado	2,870
NEW MEXICO	
Artesia	435
Caprock	1,087
Hogback	360
Jal	850
Rattlesnake	650
Table Mesa	80
Eunice	510
Hobbs	29,985
Lea	1,105
Texas-Pacific	97
Total New Mexico	35,159
Total Rocky Mountain area	80,429
Total previous week	80,273
Difference	156

Holiday Buying Stimulates Eastern Motor Fuel Market

(Continued from Page 23)

barrel, plus Mexican taxes. This is a reduction of 5 to 10 cents per barrel under recent quotations at Panuco, which have ranged 50 to 55 cents. Panuco crude is a specialty crude, used mainly for production of crude oil and asphalt.

Venezuelan crude quotations have held firm, notwithstanding the tariff. Production in that country is controlled principally by Standard of New Jersey, Gulf, and Royal Dutch-Shell, all firm holders, and no demoralization in prices is looked for, notwithstanding shutting off of the American market for gasoline from the Caribbean refining area.

Interest in export circles this week was centering largely on Paris, where the international oil group resumed deliberations in an effort to develop a plan for stabilization of export markets.

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic ports (there were no receipts at the Gulf) totaled 315,000 bbls., a daily average of 45,000 bbls. There were no receipts during the previous week. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports:	
Baltimore	75,000
New York	215,000
Others	25,000
Total	315,000
Daily average	45,000
Daily average four weeks	28,286

All of the week's receipts at Atlantic ports consisted of gasoline.

The advance in California crude oil quotations has firmed up the position of the Pacific Coast motor fuel market, but a larger intercoastal movement of gasoline, represented mainly by intercompany shipment, is looked for during the summer months, with the California product replacing regular shipments formerly reaching Atlantic Coast ports from South America.

Petroleum Exports

New business was conspicuous by its absence in the local export market during the past week, and shipments on standing contracts were of small amount.

The following table shows exports of principal refined petroleum products from the port of New York for the past three weeks (all figures in gallons unless otherwise noted):

	Week ended		
	June 25	June 18	June 11
Gasoline	7,000	225,000	106,000
Naphtha	.....	340,000	280,000
Kerosene	4,000	22,000	28,000
Fuel and gas oil	31,000	45,000	265,000
Lubricating oil	1,055,000	460,000	1,125,000
Petroleum, refined	70,000	75,000	180,000
	Pounds		
Petrolatum	.....	12,000	8,000
Paraffin wax	850,000	975,000	750,000
Refined	200,000	360,000	55,000
Scale	12,000	...	40,000
Lubricating grease	495,000	400,000	680,000

Russia and Rumania are still underselling the American market on most refined products, and this condition, coupled with falling world consumption and increased production of refined products abroad, tends to further narrow the

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American export market, in so far as New York exporters are concerned.

Imports

Imports of crude and refined petroleum at the principal United States ports for the week ended June 25 totaled 2,222,000 bbls., a daily average of 317,428 bbls., compared with a daily average of 347,286 bbls. for the week ended June 18 and 336,607 bbls. for the four weeks ended June 25. The bulk of the week's imports came in on Sunday and Monday, in advance of the new import duties which became effective June 21. Details follow:

	Bbls. of 42 gals.
At Atlantic Coast ports:	
Baltimore	204,000
Boston	78,000
New York	1,323,000
Philadelphia	259,000
Others	233,000
Total	2,097,000
Daily average	299,571
At Gulf Coast ports:	
Port Arthur and Sabine district	125,000
Total	125,000
Daily average	17,857
At all United States ports:	
Total	2,222,000
Daily average	317,428
Daily average four weeks	335,607

Distribution of total imports during the week ended June 25 was as follows:

Crude	1,640,000
Gasoline	268,000
Fuel oil	314,000

Importing companies have sharply revised their shipment schedules, and it is expected that gasoline imports will be entirely eliminated, with movement of foreign crude and fuel oil into the United States also along curtailed lines.

Sixteen States Report Increase In Demand for Road Oil

(Continued from Page 22)

as the Minnesota requirements for 1933 are concerned, according to C. L. Motl, assistant maintenance engineer of the highway department, "we have no way of estimating at this time what will be done next year, since the state legislature meets during the coming winter and the present economic stress may express itself in any one of several ways before the 1933 road program gets under way.

Michigan

Purchases of asphalts and road oils will show no decrease in 1932 and 1933 from the quantities purchased in 1931, according to H. A. Clemetsen, assistant materials and equipment engineer of the Michigan highway department. Petroleum roadbuilding materials bought in 1931 totaled 1,595,000 gallons as follows: Asphalts, cold and hot application, 757,000 gallons; cold patch, 83,000 gallons; emulsions, 205,000 gallons; dust laying oil, 20,000 gallons. High carbon road oils for surface treat and retread, cold and hot application, totaled 530,000 gallons.

Kansas

Kansas shows itself to be another heavy user of road oils, with a total of 16,570,800 gallons for 1931. The state highway commission sees no decrease in the purchases of roadbuilding and maintenance material in 1932 and 1933. In 1932 the Kansas commission bought 954 tons of low penetration asphalt, 421,026 gallons of cutback asphalt and 283,088 gallons of emulsified asphalt. The asphalts were used on maintenance or maintenance resurfacing projects, while the road oils were used on resurfacing and construction projects, as well as maintenance repair work.

Nebraska

Nebraska has issued a supplemental specifications for road or plant mixed bituminous mat surfacing dated June 1, and a June 15 supplement for road or plant mixed oil sand surfacing, and these are awaiting approval of the U. S. Bureau of Public Roads. However, it is the understanding of the Nebraska department of public works that the use of these supplements in connection with work for which bids will be received in the immediate future will be approved by the bureau. Quantities of road oils and asphalts used in the work performed under supervision of the state department during 1931 were: 2,460,000 gallons of road oils, 1,038,000 gallons of cutback asphalt, and 50,000 gallons of emulsion. Due to uncertainty involved in the work to be included in the 1932 road construction program, the department does not feel in a position to give a reliable estimate of gallonage of these materials for 1932 work.

Other States

Georgia is another state which sees no decrease in 1932 and 1933 in the purchases of road construction materials. Buying has been on a lower level than in previous years when important projects were undertaken. In 1931 Georgia used approximately 1,000,000 gallons of asphalt in maintenance and construction work.

Oklahoma originally planned a program for 1931, which would require between 15,000,000 and 16,000,000 gallons of road oil. However, these plans went astray and only 8,000,000 gallons were used. In addition to the road oil work, the state built a 20-mile highway of single bituminous surface treat using asphaltic cement of 200-250 penetration, and constructed one retread project, approximately 10 miles in length, using cutback asphalt. No hot mix wearing surfaces using the 40-50 penetration asphalt were laid in 1931.

South Carolina has not completed estimates on quantities of road oils and asphalts to be used in 1932 and 1933. Quantities and types of road materials purchased in 1931, follow: Asphalt, 150-200, 238,333 gallons; asphalt, 85-100, 26,750 gallons; asphalt, 150-180, 6,000 gallons; cutback asphalt, two grades, 11,100 gallons and 697,286 gallons; cutback, 150-200, 900 gallons; cutback, 85-100, 12,650 gallons; cutback, 60-70, 1,600 gallons; asphalt emulsions, 21,300 gallons; road oil (distillate), 4,000 gallons; joint filler (asphalt), 14,350 gallons; cold patch (asphalt), 8,960 gallons; cold patch (tar), 200 gallons; tar prime, 101,060 gallons.

Ohio sees a slight decrease for 1932 in the quantities of road matcrials, according to O. W. Merrell, director of the Ohio department of highways. Quantities of road oils and asphalts used in state work during 1931 follow: Asphalt, 500,000 gallons; road oil, 6,500,000 gallons; cutback asphalt, 4,500,000 gallons; emulsions, 4,000,000 gallons.

The Iowa highway commission recently purchased approximately 1,600,000 gallons of road oil for treatment of gravel road surfaces this year, while in 1931 the quantity of this material purchased by the state was only 100,000 gallons, or one-sixteenth of the 1932 total. It appears that the experiment with oil treated roads is working out favorably, but according to Bert Myers, materials and testing engineer of the highway commission, future programs are somewhat indefinite and are depending upon the service obtained from the types of roads under construction. Most of the oils purchased are of the residual type.

North Dakota uses three grades of road oils. A "B" oil is used for waterproofing heavy clay roads and as a tack coat under mats. An "MR" oil is used for oil-gravel mix when mixing is done with blade graders on the road, and an "M" oil is used for oiling gravel mix when the oil and gravel are dried and mixed in a plant and hauled to the roadway ready to spread. The state expects to use 20 cars of "B" oil, 50 cars of "MR" oil, and 100 cars of "M" oil in 1932. There are slight changes noted in the 1933 specifications.

Mississippi's roadbuilding funds are reported very limited and maintenance materials are ordered only as needed. However, from July, 1931, to the close of June, 1932, the state has used approximately (in tank cars), 170,000 gallons of tar; 160,000 gallons of asphalt, 25,000 gallons of cutback asphalt, and 80,000 gallons of emulsion on road work.

North Carolina is releasing new specifications this week. A slight decrease is expected in the amount of surface treatment of 1932 and 1933, according to Leslie R. Ames, state highway engineer. Highway construction work completed in 1931, was as follows: Total miles of new work, 285 miles, and total amount of retreatments was approximately 659 miles.

Illinois has less to do with supervision of work on roads in the state than is the case with most states. Most of the contruction and maintenance work is in the hands of county commissions. At this time, however, Chicago is seeking to have the state take over a considerable part of the urban and suburban system, and it is understood that state supervision is planned in other sections. In 1931 the state used approximately 4,600 tons of asphalt. In addition to this, says V. L. Glover, state engineer of materials, the various counties and townships throughout the state bought large quantities of road oils of which the state has no record.

Wildcat Operations in West Texas

(Continued from Page 38)

The Texas Company's No. 1 B. B. Ingham, 330 ft. from S and 2,330 ft. from E line, Sec. 36½, L&G.N. Sur...Drlg. 150 ft.

COKE COUNTY

Mid-Kansas Oil & Gas Co.'s No. 1 Hearn, 930 ft. from S and W, Sec. 371, Blk. 1-A, H.&T.C. Sur. .....Drlg. 2,425 ft.

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R Sur. .....To resume drilling.

ECTOR COUNTY

Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur. .....Drlg. 3,075 ft.

H. F. Wurts' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur. .....S.D. 3,605 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.P. No. 7,247 .....S.D. 2,600 ft.

FISHER COUNTY

Condor Petroleum Co.'s No. 1 Steele, 660 ft. from S and 330 ft. from W of W half of SE Sec. 210, B.B.B.&C. Ry. Sur. .....T.D. 2,922 ft.; 1 small head in 22 hrs.

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 380 ft. from E, Sec. 200, Blk. 1, B.B.B.&C. Sur. .....Drlg. 5,600 ft.

Sinclair-Prairie's No. 2 Steele, 250 ft. from N and W of NE Sec. 72, H.T.&B. Sur. .....Drlg. 2,910 ft.

Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur. .....Drlg. 675 ft.

GAINES COUNTY

McElreath et al's No. 1 Sparks, 330 ft. from N and E Sec. 397, Blk. G .....S.D. 504 ft.; moving in rotary; rigging rotary.

GLASSCOCK COUNTY

Kirby et al's No. 1 Baker, 330 ft. from N and W Sec. 23, Blk. 33, Twp. 2s, T.&P. Sur. .....S.D. 2,383 ft.

Mann et al's No. 1 fee, 330 ft. from N and 1,980 ft. from E, Sec. 37, Blk. 34, Twp. 3s, T.&P. Sur. .....T.D. 3,470 ft.; to plug.

GARZA COUNTY

Penny & Posey's No. 1 Justice, 1,980 ft. from S and 1,680 ft. from E of Sec. 25, Blk. 6, H.&G.N. Sur. (3,500-ft. cable tool test) .....S.D. 3,390 ft.

HOWARD COUNTY

American-Maracaibo's No. 5-A Settles, 1,896 ft. from N, 1,554 ft. from W, Sec. 6, Blk. 32, T.&P. Sur. .....S.D. 185 ft.

Amerada Pet. Corp.'s No. 4 Coffee, 1,300 ft. from N and 1,650 ft. from W, Sec. 22, Blk. 33, Twp. 2s, T.&P. Sur. .....Location.

Amerada Pet. Corp.'s No. 5 Coffee, 2,310 ft. from N and 1,650 ft. from W, Sec. 22, Blk. 33 .....Location.

Green O. & R. Co.'s No. 1 Denman, 990 ft. from S and 2,310 ft. from W, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur..Spudded and S.D.

Merrick & Lamb's No. 4 Chalk, 1,650 ft. from N and 990 ft. from W, Sec. 125, Blk. 29, W.&N.W. Sur. .....Rigging up machine.

Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. .....S.D. 1,030 ft.

Pure Oil Co.'s No. 12 Chalk, 1,650 ft. from N and E, Sec. 125, Blk. 29, W.&N.W. Sur. .....T.D. 1,850 ft.; plugged back to 1,760 ft.; to put on pump.

Schermerhorn Oil Co.'s No. 5 Kloh, 660 ft. from S and W of Sec. 13, Blk. 33, Twp. 2s, T.&P. Sur. .....T.D. 2,500 ft.; to put on pump.

Sinclair-Prairie Oil Co.'s No. 2 Dodge, 2,313 ft. from S and 300 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur. .....Drlg. 2,550 ft.

IRION COUNTY

Apollo Oil Co.'s No. 4 Nutt, 504 ft. from N and 1,562 ft. from W of Subd. No. 6, Gonzales County School Land .....Drlg. 1,240 ft.

Davis et al's No. 1 Suggs, 1,560 ft. from S and 925 ft. from W, Sec. 3,081, Blk. 28, H.&T.C. Sur. .....S.D. 7,543 ft.

Johnson's No. 1 Tankersley, 1,340 ft. from S and 150 ft. from E, Sec. 726, F. Sockstedt Sur. .....T.D. 1,398 ft.; plugged back to 1,361 ft.

Stanolind Oil & Gas Co.'s No. 1 Williams, 1,320 ft. from S and E of Sec. 1,196, T.T.R.R. Sur. .....S.D. 7,420 ft.; moving in Diesel engine.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 42.4-acre tract in G. Martinez Sur. .....S.D. 1,005 ft.; temp. abnd.

Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. .....Spudded and S.D.

J. M. Johnson's No. 1 Swann, 6,150 ft. from S and 1,550 ft. from E, I. Miley Sur. .....Drlg. 1,265 ft.

Robert Oil Co.'s No. 1 Swann, 2,350 ft. from W and 2,920 ft. from S, I. Miley Sur. .....Drlg. 1,100 ft.

Smart & Reynolds' No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3..S.D. 175 ft.

Southern Oil Co.'s. No. 1 Sears, 300 ft. from S and W J. H. Grayson Sur. .....T.D. 535 ft.; running 12-in. csg.

C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 .....S.D. 1,751 ft.

Transcontinental Prod. Co.'s No. 1 Rust, 5,300 ft. N and 995 ft. W of SE cor. J. J. Hughes Sur. 556 .....Spudded.

Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 3, O.A.L. Sur. .....Location.

LOVING COUNTY

Eppenauer's No. 1 Freels, 1,263 ft. from NE, 410 ft. from NW, Sec. 92, Blk. 1, W.&N.W. Sur. .....Drlg. 4,125 ft.

Covey et al's No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. .....S.D. 1,300 ft.

Eppenauer Drlg. Co.'s No. 1 Allen, 466 ft. from NE and SE, Sec. 4, Blk. 2, W.&N.W. Sur. .....S.D. 4,263 ft.

Ervin & Mahres' No. 1 Thrope, 2,310 ft. from E and 330 ft. from S, Sec. 46, Blk. 53, T.&P. Sur. .....S.D. 810 ft.

Fair Lawn Syndicate's No. 1 Brookfield, 330 ft. from N and W, Sec. 30, Blk. 29, P.S.L. .....Drlg. 2,130 ft.

Falbre & Evans' No. 1 Dean, 330 ft. from NE and 990 ft. from NW, Sec. 79, Blk. 33, H.&T.C. Sur. .....S.D. 4,275 ft.

Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. .....Drlg. 625 ft.

Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur...S.D. 2,280 ft.

Martin's No. 1 Freels, 3,514 ft. from NE and 412 ft. from NW of Sec. 92, Blk. 1, W.&N.W. Sur. .....T.D. 4,051 ft.; running 6⅝-in csg.

Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 33, Blk. 1, W.&N.W. Sur. .....Rig.

Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 .....Spudded and S.D.

Tennant et al's No. 1 Martin, 990 ft. from NW and SW, Sec. 66, Blk. 1, W.&N.W. Sur. .....T.D. 4,388 ft.

Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... S.D. 3,660 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... S.D. 2,860 ft.

PECOS COUNTY

Adams et al's No. 1 Shearer, 1,650 ft. from SE and 330 ft. from NE Sec. 101, Blk. 10, H.&G.N. Sur. ..... Material.

Aero Gas & Royalty Co.'s No. 2 Byrne, 1,470 ft. from NW and 1,500 ft. from SW, Sec. 54, Blk. 10, H.&G.W. Sur. ..... Material on ground.

Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.

Hampton et al's No. 1 Byrne, 1,980 ft. from NW and 1,500 ft. from NE, Sec. 54, Blk. 10, H.&G.N. Sur. ... S.D. 1,395 ft.; T.P. 1,356 ft.

New State Oil Co.'s No. 1 Tippett, 1,349 ft. from S and 330 ft. from E, Sec. 46, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 540 ft.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 6-C University, 1,370 ft. fro mS and 1,000 ft. from E, Sec. 12, Blk. 2 ..... T.D. 8,367 ft.; drlg. on tools 7,979 ft.

Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ..... Drlg. 5,210 ft.

Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 3,803 ft.

REEVES COUNTY

F. McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 32, Blk. 59, P.S.L. Sur. ... Drlg. 1,210 ft.

Southern Star Oil Co.'s No. 1 Wright, 1,320 ft. from S and W, Sec. 58, Cassel's Sur. ..... Drlg. 255 ft.

RUNNELS COUNTY

Blue Bonnett Oil Co.'s No. 1 McMillan, 1,365 ft. from N and 660 ft. from W, Sec. 32, N. Travis Sur. ..... Cleaning out 1,944 ft.

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Hell Sur. No. 519 ..... S.O. 3,417-30 ft.; S.D. 3,600 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... T.D. 5,410 ft.; fishing.

Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... T.D. 5,580 ft.; drlg. by tools

George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,670 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,053 ft.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, E.&T.C. Sub. ..... S.D. 5,050 ft.

W. S. Guthrie's No. 1 Snyder National Bank, 330 ft. from N and 2,310 ft. from E of Sec. 115, Blk. 97, H.&T.C. Sur. ..... Drlg. 645 ft.

Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.

Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... S.D. 4,875 ft.

TAYLOR COUNTY

Dunigan et al's No. 2 Hunter, 2,337 ft. from N and 3,567 ft. from E of Sec. 27, W. R. Wills Sur. No. 122 .. Drlg. 1,075 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M.-K.-T. Sur. ..... S.D. 2,269 ft.

Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 3,150 ft.; moved off tools.

Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S, Sec. 26, Blk. 161, G.C.&S.F. Sur.. S.D. 6,120 ft.

Jones et al's No. 1 Pankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.

Sides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... Drlg. 1,970 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 337 ft. from E of John McNeese Sur. ..... S.D. 760 ft.; S.O. and gas 725 ft

Mintex Oil Co.'s No. 1 Campbell Est., 440 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur.... S.D. 1,994 ft.

Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Farley et al's No. 2 Lane, 1,650 ft. from S and 330 ft. from W, Sec. 36, Blk. 1, M.-K.-T. Sur. ..... Location.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoas, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1 ,I.&G.N. Sur. ... S. D. 220 ft.

Independent Operators' No. 1 Whitehead, SE SE Sec. 10, Blk. 4, I.&G.N. Sur., elev. 1,175 ft. ..... S.D. 5,360 ft.

O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev 2,130 ft. ..... S.D. 6,750 ft.

WARD COUNTY

Abell Bros. et al's No. 1 Smith, 330 ft. from NE and NW, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Fishing 2,265 ft.

Abell Bros.' No. 2 Smith, 2,310 ft. from SE and 2,020 ft. from NE, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 270 ft.

Abell Bros.' No. 3 Smith, 2,310 ft. from NE and NW, Sec. 4 ..... Drlg. 1,420 ft.

Bradford & Bentley's No. 1 B. Carson, 1,650 ft. from the NE line and 990 ft. from the SE line of Sec. 36, H.&T.C. Sur., Blk. " ..... Drlg. 2,000 ft.

Caprito et al's No. 1 Beatty, 330 ft. from SW and 990 ft. from SE, Sec. 2, Blk. 34, H.&T.C. Sur. ..... Material on ground.

Eastland Oil Co.'s No. 1 Green, 2,364 ft. from NW and 2,310 ft. from SW Sec. 4, Blk. 34, H.&T.C. Sur. ..... Rigging up.

Eastland Oil Co.'s No. 2 Weiss, 1,728 ft. from SW and 2,365 ft. from SE, Sec. 4, Blk. 34, H.&T.C. Sur. ..... Location.

Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.

H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft. (corrected).

Gulf Prod. Co.'s No. 11 Hutchings, 330 ft. from N and 990 ft. from W of 370 acres in S half Sec. 5, Blk. F .. Drlg. 2,680 ft.; flowing 45 bbls. in 24 hrs.

Gulf Production Co.'s No. 22 O'Brien, 1,100 ft. from N and 330 ft. from E, Sec. 16, Blk. F, G.M.M.B.&A. Sur. ..... Rig.

Leydecker et al's No. 1 Bennett, 2,310 ft. from NW and NE, Sec. 16, Blk. 34, H.&T.C. Sur. ..... T.D. 2,532 ft.; 500 ft. oil in hole from 2,316 ft.

Massie et al's No. 1 Stewart, 330 ft. from SW and SE, Sec. 12, Blk. 14, H.&T.C. Cur. ..... S.D. 2,445 ft.

Moran & Burkhart's No. 2 J. T. Sweatt et al, 3,510 ft. from SW, Sec. 1, J. Howe Sur. ..... S.D. 2,000 ft.

R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,522 ft. from SW, Sec. 1, J. Howe Sur. ..... T.D. 1,760 ft.; underreaming 5¼-in. csg. at 1,740 ft.

Penn Oil Co.'s No. 1 York, 2,310 ft. from NW and SW Sec. 10, Blk. 34, H.&T.C. Sur. ..... Drlg. 175 ft.

Plains Prod. Co.' and Simms Oil Co.'s No. 1 Benton Land Co., 440 ft. from the SE and 440 ft. from SW lines of Sec. 26, W.&N.W.R.R. Sur., Blk. 1 ..... Drlg. 1,675 ft.

Renaud-Prettyman's No. 1 University, 330 ft. from N and E Sec. 4, Blk. 10 ..... Drlg. 1,210 ft.

Rixford et al's No. 1 Green, 330 ft. from NW and SW Sec. 4, Blk. 34, H.&T.C. Sur. ..... T.D. 2,454 ft.

Sturm-Simms Oil & Gas Co.'s No. 2 Jones, 1,650 ft. from NE and 330 ft. from SE, Sec. 25, Blk. B-39, P.S.L.... S.D. 2,500 ft.; flowing 100 bbls. daily.

Thomas et al's No. 1 Bennett, 2,310 ft. from NE and SE, Sec. 16, Blk. 34, H.&T.C. Sur. ..... S.D. 560 ft.

White et al's No. 1 Burtner, 150 ft. from NE and 515 ft. from SE of Sec. 8, Blk. 32, H.&T.C. Sur. ..... S.D. 755 ft.

WINKLER COUNTY

Adams et al's No. 1 Scarborough, 660 ft. from N and E Sec. 1, Blk. 77, P.S.L. ..... T.P. 2,820 ft.; T.D. 3,175 ft.; swabbed 180 bbls. in 12 hrs.; running tu ing.

Wildcat Operations in Texas Panhandle

Week Ending July 4

BRISCOE COUNTY

Company, well, farm name, section and block— Remarks:

Humble O. & R. Co.'s No. 1 C. Adair est., 2,500 ft. from N line, 2,100 ft. from E line, Sec. 7, Blk. G-6 ..... S.D. 4,000 ft.

CARSON COUNTY

Danciger's No. 4 Byrum, 330 ft. from N and E, Sec. 188, Blk. 3, I.&G.N. Sur. ..... Cellar.

H. A. M. Oil Co.'s No. 2 Cooper, 330 ft. from S and E, Sec. 8, Blk. 9, I.&G.N. Sur. ..... Location.

Pulse-Shell Pet. Corp.'s No. 1 Byrum, 330 ft. from N and W, W½ NE, Sec. 188, Blk. 3, I.&G.N. Sur. .... T.P. 3,068 ft.; drlg. 3,190 ft.; flowed 40 bbls. in 24 hrs.

Skelly Oil Co.'s No. 10 E. Schaffer, 440 ft. from S, 2,640 ft. from E of N half, Sec. 189, Blk. 3, I.&G.N. Sur.... T.D. 3,238 ft.; to shoot.

Skelly Oil Co.'s No. 11 East Schaffer, 440 ft. from N, 2,640 ft. from E, Sec. 189, Blk. 3, I.&G.N. Sur. ..... Location.

Skelly Oil Co.'s No. 18 West Schaffer, Blk. 4, Sec. 87, I.&G.N. Sur. ..... Swabbed 20 bbls. in 6 hrs.; cmtd. 8-in. csg. at 2,185 ft.

The Texas Co.'s No. 1-C Garner, 990 ft. from N and E, NW, Sec. 94, Blk. 4, I.&G.N. Sur. ..... Drlg. 2,550 ft.

Texoma Nat. Gas Co.'s No. 1-G Dover, 2,420 ft. from N, 2,645 ft. from W, Sec. 74, Blk. 4, I.&G.N. Sur. ..... Rigging up cable tools.

COLLINGSWORTH COUNTY

Dixon et al's No. 1 Bell, 330 ft. N, 1,320 ft. W, Sec. 102, Blk. 21, H.&G.N. Sur. ..... S.D. 2,508 ft.

Downey et al's No. 1 Beasley, SE cor. SW SE, Sec. 95, Blk. 15, H.&G.N. Sur. ..... Rigged up.

Kates et al's No. 1 Hickman, center NE, Sec. 43, Blk. 10, H.&G.N. Sur. ..... Location.

COTTLE COUNTY

Darby Pet. Co. et al's No. 1 Puersil, 330 ft. from N, 1,320 ft. from E, Sec. 40, Blk. B, John H. Stevens Sur. ..... Building rig.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 13-3n-3e ..... Drlg. 610 ft.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... S.D. 2,428 ft.

Bell O. & G. Co.'s No. 1 Tedesco-Webb, 330 ft. from S and E, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Rig on ground.

Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... S.D. 1,650 ft.

Danciger O. & R. Co.'s No. 3 Williams, 150 ft. from N, 1,650 ft. from W S half NW, Sec. 7, Blk. 1, A.C.H.& B. Sur. ..... Building derrick.

Danciger O. & R. Co.'s No. 9 Powell-Beck, 330 ft. from N, 1,605 ft. from W, Sec. 28, Blk. B-2, H.&G.N. Sur... T.D. 2,781 ft.; standardizing.

Elbar Corp.'s No. 1 Sethings, 330 ft. from S and E, Sec. 13, Blk. A-9, H.&G.N. Sur. ..... Drlg. 2,075 ft.

Granite Prod. Co.'s No. 1 Chapman, 275 ft. from N line, 110 ft. from W line, S½ SW, Sec. of Blk. 26, H. &G.N. Sur. ..... S.D. 2,900 ft.

Jean Pet. Co.'s No. 1 Furneaux Bros., 330 ft. N and W, cor. SE, Sec. 200, Blk. 2-B, H.&G.N. Sur. ..... Fishing 3,076 ft.

Jewel Oil Co.'s No. 1 Meers, 330 ft. from S and W, NW SW, Sec. 106, Blk. 3, I.&G.N. Sur. ..... Fishing 3,325 ft.

Mazda-Shell's No. 2 Worley Reynolds, 660 ft. from S and E of NE, Sec. 35, Blk. 3, I.&G.N. Sur. ..... Drlg. 2,180 ft.

Nipper et al's No. 1 Morse, 330 ft. from N and E, Sec. 1, Blk. 26, I.&G.N. Sur. ..... Fishing 2,635 ft.

Nabob Oil Co.'s No. 1-E Morse, 330 ft. from S and W, W½ SE, Sec. 67, Blk. 25, H.&G.N. Sur. ..... Drlg. 2,335 ft.; gas at 2,275 ft.

Parton & Holt's No. 2 Morse, 330 ft. from W, 250 ft. from N, W½ SW, Sec. 5, Blk. 26, H.&G.N. Sur. ..... T.D. 1,603 ft.; underreaming 8-in. csg.

Pulse-Shell Pet. Corp.'s No. 1 Culler, 330 ft. from S and E, Sec. 173, Blk. 3, I.&G.N. Sur. ..... Drlg. 1,225 ft.

Pulse-Shell's No. 1 Brown, 290 ft. from N, 250 ft. from E of NW, Sec. 128, Blk. 3, I.&G.N. Sur. ..... Rig.

Saulsbury et al's No. 1 Davidson, 330 ft. from S and W, Sec. 87, Blk. B-2, H.&G.N. Sur. ..... Drlg. 2,760 ft.

Saunders et al's No. 2 Sullivan, 822 ft. from W, 231 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, I.&G.N. Sur. ..... Will plug back to 2,375 ft. and shoot.

Tarber's No. 1 Saunders, 330 ft. N and W, Sec. 3, Blk. 1, B.B.&S.F. Sur. ..... Location.

Tedesco Oil Co.'s No. 3 Morse, 330 ft. from N and E of NE SW, Sec. 1, Blk. 26, H.&G.N. Sur. ..... Drlg. 2,115 ft.

The Texas Co.'s No. 4 Davis (old well drilled deeper), Blk. 1, Sec. 8, A.C.H.&B. Sur. ..... Cellar.

The Texas Co.'s No. 10 Cook-Faulkner, 330 ft. from S, 1,605 ft. from W, Sec. 29, Blk. B-2, H.&G.N. Sur..... Fishing 2,770 ft.

The Texas Co.'s No. 10 Williams, 150 ft. from S, 1,650 ft. from W, Sec. 7, Blk. 1, A.C.H.&B. Sur. ..... Rigging up rotary.

Thorp et al's No. 1 Short, 330 ft. from N and E, Sec. 2, Blk. 1, H.&G.N. Sur. ..... Moving in rig.

Travis' No. 3 Back, 330 ft. from S, 2,300 ft. from E, Sec. 44, Blk. 25, H.&G.N. Sur. ..... S.D. 2,955 ft.; shot 40 qts. 2,595-2,630 ft.; to test.

Trippiehorn Bros.' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur. ..... Location.

Travis et al's No. 2-B Webb, 990 ft. from S, 330 ft. from E of NW, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Location.

Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur. ..... Spudded.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,200 ft. from E, G. S. Hood Sur. ..... To deepen old well; T.D. 5,055 ft.; rigging up.

HUTCHINSON COUNTY

Baso's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur. ..... T.D. 3,030 ft.; shot 100 qts. 3,023-64 ft.; may plug.

Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.

Deal O. & G. Co.'s No. 2 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur. ... S.D. 450 ft.

Holmes & Newblock's No. 2 Moore-Langdon, 330 ft. from N and W, Sec. 125, Blk. 4, I.&G.N. Sur. ..... Drlg. 2,350 ft.

Huber Pet. Co.'s No. 1-A Weatherly, 330 ft. from N and W, Sec. 26, Blk. Y, A.&B. Sur. ..... Drlg. 2,525 ft.

Liner Drlg. Co.'s No. 1-D Johnson, 330 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur. ..... Plugged back to 2,146 ft.; S.D.

Oates & Morrow's No. 2 Starnes, 1,400 ft. from S, 660 ft. from E, Sec. 24, Blk. M-23, T.C.R.R. Sur. ..... Rig.

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Produced in 8 Modern Refineries Meet Every Petroleum Requirement

THROUGH 3800 miles of pipe lines, crude from the major fields of California, New Mexico, Texas, Oklahoma, Kansas, Louisiana, and Arkansas flows to the 8 Shell Refineries for processing.

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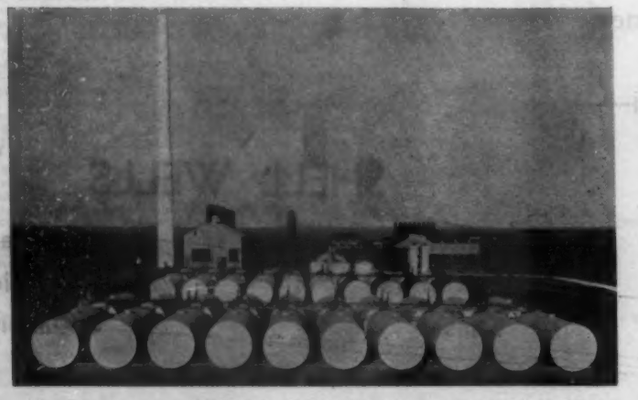

GRAVER BUILT

Pharis Oil Co.'s No. 8 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. T, M.&C. Sur. ..... Spudded.
Rock Creek Oil Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. T, A.&B. Sur. ..... Location.
Timms-Deatch's No. 4 Moore, 330 ft. N and W, Sec. 124, Blk. 4, I.&G.N. Sur. ..... Rig.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,003 ft.

MOORE COUNTY

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ..... S.D. 205 ft.
Interstate's No. 1 Nield, C NE, Sec. 18, Blk. 44, H.&T. C. Sur. ..... Rig up.
Pollard et al's No. 1 Hall, 330 ft. S and E, NE, Sec. 131, Blk. 3-T, T.&N.O. Sur. ..... Rig on ground.
Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 360, Blk. 44, H.&T.C. Sur. ..... Drlg. 805 ft.
Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur. .... Rig.
Sunray Oil Co.'s No. 2 Jones, 330 ft. N and W, W½ SW, Sec. 164, Blk. 3-T, T.&N.O. Sur. ..... Rig.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 19, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 12, T.&N.O. Sur. ..... S.D. 400 ft.
Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. S, G.C.&S.F. Sur. ..... Underreaming 8-in. csg. 3,750 ft.

PARMER COUNTY

Magnolia Pet. Co.'s No. 1 Wilson, 330 ft. from N and W, SE, Sec. 73, H. Kelly Sur. ..... Drlg. 5,645 ft.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... Cmtd. cave 4,090 ft.
Travis et al's No. 1 Cunningham, 330 ft. S and W, Sec. 74, Blk. M-2, H.&G.N. Sur. ..... S.D. 2,690 ft.

WHEELER COUNTY

Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur. ..... T.D. 2,760 ft.; estm. 1,000 ft. oil in hole.

East Central Texas Wildcats

(Continued from Page 37)

Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur. ..... S.D. 1,435 ft.
Clark Brooks' No. 1 Anderson, SE cor. of 3,900-ac. tract, 10 miles SW of Wachatchie, E. C. Branch Sur. ..... Location.
Worthen Petroleum Co.'s No. 2 Cerf, Mulligan Farm Sur., 50 ft. W of No. 1 ..... Prepare to abandon; T.D. 3,220 ft.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 200 ft. from E line of 114-ac. tr., W. M. Dawson Sur. .... To make drill stem test, 3,220 ft.
T. B. Mayberry's No. 1 M. L. Edwards, 345 ft. from E line of lease and 6¼ miles NW of Mount Vernon, C. R. Miller Sur. ..... Derrick.

GREGG COUNTY

Acme Oil Co.'s No. 1 J. S. Elder, center of 3-ac. tract, M. V. Winkle Sur. ..... Drlg. 2,570 ft.
Henry L. Allen's No. 1 Bonner Estate, 330 ft. from N and E lines of 19.4-ac. lease, J. McRae Sur. .... Swabbing, 3,000 ft. oil in hole.
D. M. Buffington's No. 1 Dansley, 500 ft. W and 200 ft. N of NE cor. of Searight Blackman 100-ac. lease, W. P. Chisum Sur. ..... S.D. 1,700 ft.
Burnham and Johnson's No. 1 H. L. Dansby, 650 ft. from E line of tract and 260 ft. from S line of lease, W. P. Chisum Sur. ..... Derrick.
Dean and Atkinson's No. 1 A. V. Bacle, center of S 3.64 acres of E 7.28 acres of N half of 29.13-ac. tract, D. Sanches Sur. ..... Waiting on cmt. to set, 3,638 ft.
Deaner et al's No. 1 M. T. Cole, 1,665 ft. from N line and 330 ft. from W line of lease, T. Johnson Sur. .... Rig up and S.D.
Dodd and Markey's No. 1 J. F. Holt, 615 ft. E and 707 ft. N of SW cor. of 200-ac. tract, H. Edwards Sur. .... S.D. 2,025 ft.
Foshee et al's No. 1 fee, in N cor. of Blk. No. 36, H. R. Holit Sur. ..... Waiting on cmt. to set; T.D. 3,685 ft.
Gambrill et al's No. 1 Clayborn, 270 ft. S and 174 ft. E of NW cor. of Clayborn 50-ac. tract, J. Beaty Sur. ..... Waiting on cmt. to set, 3,655 ft.
Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur. .... Derrick.
Guinn Petroleum Co.'s No. 1 J. S. and F. Elder, 200 ft. NE of Solar's No. 1 Elder, and 450 ft. SE of Martin's No. 1 Elder, M. V. Winkle Sur. ..... Rig up.
Gulberson et al's No. 1 C. L. Taylor, 236 ft. S and 217 ft. E of NW cor. of N 25 acres of 50-ac. tract W. H. Castleberry Sur. ..... Drlg. 2,460 ft.
Harther Oil Co.'s No. 1 Roy Laird, SE cor. of Blk. No. 136, M. V. Winkle Sur. ..... Derrick.
H. Haubury et al's No. 1 Victory, center of Blk. No. 33, H. R. Holit Sur. ..... Waiting on cmt. to set, 3,606 ft.
Humble Oil & Refining Co.'s No. 1 J. M. Adams, 330 ft. from N and W lines of lease, J. Ruddle Sur. .... Derrick.
Humble Oil & Refining Co.'s No. 1 J. R. Smith, 320 ft. from W line and 1,070 ft. from N line of lease, D. Sanches Sur. ..... Derrick.
Island Oil Co.'s No. 1 J. W. Akin, 133 ft. from S line and 330 ft. from E line of lease, W. H. Castleberry Sur. ..... Waiting on cmt. to set; T.D 3,600 ft.
K. B. Oil Co.'s No. 1 Dickson, 150 ft. from S and 150 ft. from W of 5-ac. lease, Mary Van Winkle Sur. .... S.D. 700 ft.
Lovett-Norr et al's No. 1 Rufus Smith, 1,100 ft. from N line and 750 ft. from W line of lease, R. Slaughter Sur. ..... Set surface csg. 55 ft.
Magnolia Petroleum Co.'s No. 1 R. B. Walls, 300 ft. from S line and 270 ft. from E and W lines of 36-ac. lease, D. Dainwood Sur. ..... Waiting on cmt. to set 3,698 ft.
Lee Masters' No. 1 Mrs. F. Thompson, center of Blk. No. 151, M. V. Winkle Sur. ..... Drlg. 3,055 ft.
J. B. Patty et al's No. 1 Farrell, 330 ft. S and 175 ft. W of NE cor. of E 50 acres of 143-ac. tract, D. Sanches Sur. ..... Location.
J. D. Patty et al's No. 1 J. C. McCormick, 207 ft. SE at right angles to Gladewater-Tyler road and 540 ft. SW of Abernathy and Kirkpatrick's No. 1 Gregston, M. Dillard Sur. ..... S.D. 3,613 ft.
E. A. Payne et al's No. 1 R. M. Woods, 20 ft. from S line and 31 ft. from W line of 2.13-ac. lease, H. R. Holit Sur. ..... Derrick.
Petroleum Finance Co.'s No. 1 C. C. Crews, W offset to Sinclair Prairie's No. 24 Cole, L. Perkins Sur. ..... Derrick.
Producers Investment Co.'s No. 1 R. H. Rowland, 150 ft. SW of Crim's No. 1 Producers, M. V. Winkle Sur. ..... Testing, T.D. 3,568 ft.
Redgrave & Fagan's No. 1 A. Wynn, 160 ft. from S and E lines of 5-acre lease and tract, W. P. Chisum Sur. ..... Drlg. 1,900 ft.
Rio Oil Co.'s No. 1 Graves, 330 ft. from S line and 230 ft. from E line of lease, M. Irwin Sur. ..... Top sand 3,642 ft.; T.D. 3,666 ft.
Frank Russell's No. 1 Crimm, center of one-half-acre tract, M. V. Winkle Sur. ..... Waiting on cmt. to set, 3,441 ft.

Reno Oil Co.'s No. 1 Finley and Thomas, 150 ft. from N line and 330 ft. from W line of 10-ac. lease, C. H. Alexander Sur. ..... Waiting on cmt. to set; T.D. 2,535 ft.

J. W. Sewall, Jr.'s No. 1 A. V. Bacle, center of N 3.64 acres of W 7.28 acres of N half of 29.13-ac. tract, D. Sanches Sur. ..... T.D. 3,100 ft.

H. K. Spear et al's No. 1 J. M. Dickson, center of 2-ac. tract, M. V. Winkle Sur. ..... Swabbing 3,610 ft.

Tulsa Oil Co.'s No. 1 J. W. Fuller, 330 ft. from S line and 200 ft. from W line of lease, D. Sanches Sur. .... Rig up.

Vixcan Oil Co.'s No. 1 A. M. E. Church, 500 ft. N and 175 ft. E of Gulf's No. 6 Culver, John Wilkerson Sur. ..... Derrick.

Winona Oil Co.'s No. 1 Sumi-Wells, 330 ft. from S and E lines of tract, 550 ft. from S line of survey, J. M. Morris Sur. ..... S.D. 2,500 ft.

Wyche Bros.' No. 1 Charles Arnold, 330 ft. from E line and cen. of N and S lines of 34-acre lease, Peter Holmes Sur. ..... Drlg. 3,696 ft.

HENDERSON COUNTY

B. L. Green et al's No. 1 M. H. Gussett, (old well drilled deeper), 150 ft. from N line and 1,000 ft. from W line of 105.5-ac. tract, 3 miles SW of Mabank, L. D. Stover Sur. ..... Drlg. 2,175 ft.

HILL COUNTY

Sherman-Houseman's No. 1 J. F. Griffith, in Samuel Waddell Sur. ..... Fishing 3,256 ft.

HOPKINS COUNTY

Baark et al's No. 1 Taylor, 220 ft. from N and W lines of 80-ac. tract in the John Polk Sur. ..... S.D. 540 ft.

HOUSTON COUNTY

Nelson's No. 1 Harron, 300 ft. out of NE cor. of 327-ac. tract, J. P. Procella Sur. ..... Spudded and S.D. 87 ft.

T. B. Roberts' No. 1 Pennington, 750 varas W of E line and 600 varas from S line of survey on 186-ac. tract, Ramond LaGarza Sur. ..... T.D. 2,660-66 ft.

HUNT COUNTY

Branson et al's No. 1 Gray ..... Location.

Russell et al's No. 1 Brooks and Quattlebaum ..... S.D. 1,455 ft.

KAUFMAN COUNTY

Mandy Darnell et al's No. 1 Sally Pannill ..... S.D. 2,020 ft.

LAMAR COUNTY

G. W. Davy et al's No. 1 McGustion, 450 ft. from S line, 450 ft. from W line of farm and survey, Galet Wood Sur. ..... Temp. abnd. 3,605 ft.

Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. ..... S.D. 2,446 ft.

Doyle and Jondeau's No. 1 Horn, 226 ft. from S line and 608 ft. from E line of lease, R. P. Mayor Sur. ..... T.D. 2,890 ft.; S.D.

LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. ..... Location.

MORRIS COUNTY

Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65.5-ac. tract, J. D. Nelson Sur. ..... Swabbed little gas; repairing rig and liner; T.D. 3,567 ft.

Geo. L. Pace's No. 1 Walcott, 330 ft. from N and E lines of most northerly NE cor. of survey, 3 miles S of Carson, D. A. Russell Sur. ..... S.D. 48 ft.

NACOGDOCHES COUNTY

Adams et al's No. 1 Fuller Brothers, located in a 269-ac. tract, Jose Flores Sur. ..... Location.

Taylor-Vaughn's No. 1 Dixon Greer, 160 ft. from W and 460 ft. from N lines of 60-ac. tract in the M. G. Horrera Sur. ..... Drlg. 3,260 ft.

POLK COUNTY

Collins and Plummer's No. 2 Collins, 7 miles SE of Livingston ..... Drlg. 4,130 ft.

Taylor et al's No. 1 E. L. Duke, 330 ft. from N and W lines of 23.5-ac. tract, SW cor. of county, Peter J. Manard Sur. ..... Rig up.

RAINS COUNTY

C. H. Bayliss' No. 1 Ownby, 150 ft. N and 1,100 ft. from E of most easterly SE cor. of survey, Alexander Sur. ..... Drlg. 4,350 ft.

RED RIVER COUNTY

Hoffman and Henson's No. 1 H. H. Lennox, 2,790 ft. W and 300 ft. S of most easterly NE cor. of survey, J. E. Edmondson Sur. ..... S.D. 60 ft.

Concord Oil Co.'s No. 1 J. R. Dellahunty, 500 ft. from N of Isaac Moore Sur. and 300 ft. E of E line of Robert Glass Sur. ..... S.D. 2,546 ft.

L. G. Priest's No. 1 W. C. Ware, 2½ miles SE of English, 987 ft. from most southerly S line and 150 ft. from most easterly E line of 103.2-ac. tract, James Burkham Sur. ..... S.D. 350 ft.

ROCKWALL COUNTY

Buccaneer Oil Co.'s No. 1 H. L. Lofland, center of 60-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 120 ft.

RUSK COUNTY

Bristol & Thomas' No. 1 London School, 300 ft. W of Wissman's No. 2 Wilson, F. Cordova Sur. ..... Rig up.

Brooks Petroleum Co.'s No. 1 Mayfield, Daniel Clark Sur. ..... Top sand 3,622 ft.; waiting on standard rig; would not flow; T.D. 3,702 ft.

T. E. Castle's No. 1 R. H. Gary estate, 3,960 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... S.D. 1,875 ft.

G. & A. Oil Co.'s No. 1 W. Robinson, 321 ft. from S line and 330 ft. from W line of lease, T. J. Martin Sur. ..... Waiting on cmt. to set, 3,496 ft.

DeArman Bros.' No. 1 John Bell, center of S 5 acres of E 10 acres of 27-ac. tract, S. P. Hollingsworth Sur. ..... Drlg. 2,955 ft.

Falcon Oil Co.'s No. 1 McCord, 323 ft. from S line and 168 ft. from E and W lines of 10-ac. lease, J. B. De Cadena Sur. ..... Top sand 3,587 ft.; T.D. 3,620 ft.

Florence Oil Co.'s No. 1 R. A. Motley, 330 ft. from N and E lines of 25-acre lease, F. Cordova Sur. ..... Rig up.

Gant and Garwin's No. 1 W. P. Moore, 330 ft. S and E of SW cor. of Arkansas, W. P. Moore 40-ac. tract, M. V. Pena Sur. ..... Location.

Graner Oil Co.'s No. 1 P. C. Warren, 700 ft. W of Cameron Oil Co.'s No. 1 Warren, John Womack Sur. ..... Drlg. 2,160 ft.

George Greer's No. 1 Calvin Young, 330 ft. from N line and 250 ft. from E line of 5-acre lease, M. J. Pru Sur. ..... Drlg. 2,990 ft.

J. Quinn's No. 1 Neal Cooper, center of Blk. No. 36, T. J. Moore Sur. ..... Top sand 3,604 ft.; T.D. 3,660 ft.

Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick.

Hasting and Dodson's No. 1 E. B. Alford, center of Blk. No. 37, T. J. Moore Sur. ..... Derrick.

Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... S.D.

Holden-Rodgerson et al's No. 1 Barton and Birdwell, N offset to Reisinger et al's No. 1 Barton, W. G. Tutt Sur. ..... T.D. 3,779 ft.

Hendershot et al's No. 1 Green Washington, 330 ft. from N line and 250 ft. from W line of 11.75-ac. tract, D. Clark Sur. ..... S.D. 2,400 ft.

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7-7-32

House and Wilder's No. 1 Reddie, 330 ft. from S and E lines of S 16 acres of Reddie 99.5-ac. tract, T. Grace Sur. ..... Drlg. 2,330 ft.
W. C. Know's No. 1 W. D. Peterson, center of 3.75-ac. tract, Jacob Lewis Sur. ..... S.D. 2,200 ft.; rig moved off.
Mid-Kansas Oil & Gas Co.'s No. 1 M. A. Price, 210 ft. from N line of road and 330 ft. from W line of lease, J. B. De Cadena Sur. ..... Derrick.
Oil Properties Corp.'s No. 1 E. B. Alford, center of 3-ac. lease, Isaac G. Parker Sur. ..... Waiting on cmt. to set 3,660 ft.
Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... T.D. 3,323 ft.
Sampson and Crane's No. 1 T. H. Gill, located on 10-ac. tract offset to Houston and Karona's No. 1 Patterson, R. W. Smith Sur. ..... Drlg. 2,405 ft.
Snider and Spradner's No. 1 Brightwell, 650 ft. from S line and 150 ft. from W line of lease, R. W. Smith Sur. ..... Derrick.
Snyder et al's No. 1 H. P. Leverett, 220 ft. from S line and 167 ft. from W line of tract, J. Lindley Sur. ..... Drlg. 2,800 ft.
Souther Refining Co.'s No. 1 I.&G.N.R.R., 330 ft. SW along railroad from S line of Stanolind's lease, W. R. Cooke Sur. ..... Drlg. 1,385 ft.
Sun Oil Co.'s No. 1 Jeff Hendon, 1,193 ft. from N line and 330 ft. from W line of lease, Juan Ximines Sur. ..... Derrick.
Stanolind Oil & Gas Co.'s No. 1 W. R. McCord, 330 ft. from N line and 183 ft. from W line of 31.89-ac. lease, M. V. Pena Sur. ..... Waiting on cmt. to set, 3,598 ft.
Stanolind Oil & Gas Co.'s No. 1 Willis Wooley, 330 ft. S and E of the NW cor. of 62⅝-ac. tract, T. J. Martin Sur. ..... Top sand 3,541 ft.; T.D. 3,658 ft.
Uscan Oil Co.'s No. 1 L. Morse, center of S 5 acres of East Texas Loan's 15-ac. tract, R. B. Smith Sur. ..... Waiting on cmt. to set, T.D. 3,500 ft.
R. H. Vice's No. 1 Neal Cooper, 315 ft. SW along NW line of Cooper tract and 141 ft. SE at right angles, T. J. Moore Sur. ..... Swabbing, won't flow, T.D. 3,797 ft.
Watson and Butler's No. 1 G. W. Tippa, 330 ft. from S line and 600 ft. from W line of 18-ac. lease, H. M. Smith Sur. ..... S.D. 250 ft.
Nat Wiseman's No. 1 Thrash, 177 ft. S and 87 ft. E of NW cor. of 62.6-ac. tract and 2½-ac. lease, F. Cordova Sur. ..... Running tubing. T.D. 3,760 ft.
Paulett et al's No. 1 Ed Sparks, 350 ft. from E, 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.
York et al's No. 1 Worrell, 55 ft. from N and S line and 107 ft. from W line and 103 ft. from E line of lease, J. B. De Cadena Sur. ..... Set surface csg.

SMITH COUNTY

Hooper et al's No. 1 Lule Jackson, 330 ft. S and 530 ft. E of most northerly SW cor. of Monroe Shell Robinson lease, E. Daniels Sur. ..... Fishing for drill stem, T.D. 2,934 ft.
Joiner et al's No. 1 C. S. Jackson ..... S.D.; swabbed dry; T.D. 3,985 ft. (corrected).
J. E. Lucas' No. 1 Henry Jackson, 150 ft. from N and E lines of 25-ac. tract, James Jordan Sur. .... Waiting on cmt. to set.
Rabe et al's No. 1 Bateman, 332 ft. from S line and 278 ft. from E line of 15-ac. lease, James Jordan Sur. ..... Derrick.
F. L. Shackelford's No. 1 Lula Jackson, 354 ft. E along N line of Summitt Mayfield lease, from NW cor. and 357 ft. N at right angles, E. Daniels Sur. ..... Rig up.
Alph Tillman et al's No. 1 Jessie Cole, 137 ft. from E line and 375 ft. from N line of 32-ac. lease, center of 5-ac. lease, James Jordan Sur. ..... Drlg. 3,075 ft.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... T.D. 4,212 ft.

UPSHUR COUNTY

Conservative Oil Co.'s No. 1 A. O. Phillips, 320 ft. from S line and 580 ft. from E line of 20-ac. lease, S. Harrell Sur. ..... T.D. 2,585 ft.
Grover Hart's No. 1 Allen, 330 ft. from S and E lines of lease, one-half mile W of Mountain, Gonzales Sur. ..... Derrick.
Hawkeye Petroleum Co.'s No. 1 L. L. Markey, 150 ft. from E line and center of N and S lines of 141.7-ac. tract, T. Hopkins Sur. ..... Drlg. 1,800 ft.
Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1¼ miles N of Cranfill & Reynolds' No. 1 Nash, John Denson Sur. ..... Waiting orders 3,710 ft.
Humble Oil & Ref. Co.'s No. 1 W. C. Mackey, 348 ft. from S line and 330 ft. from W line of 198.5-acre lease, H. F. Rogers Sur. ..... No report.
Maddox Development Co.'s No. 1 Willie Starr, 602 ft. from S line and 330 ft. from W line of 96-ac. tract, C. H. Cooper Sur. ..... Swabbing, T.D. 3,663 ft.
Bob Manzell's No. 1 E. O'Byrne, 436 ft. SW along SE line of 256-ac. tract, J. M. Pineda Sur. ..... Waiting on cmt. to set. 3,630 ft.
Peckham Oil Co.'s No. 1 E. H. Hampton, 320 ft. from S and E line of S 60 acres of E 150 acres of 192-ac tract, William King Sur. ..... Top sand 3,686 ft.; S.D. 3,685 ft.
Pitts et al's No. 1 H. Davis, center of 7.5-ac. lease, W. R. Stephens Sur. ..... Derrick.
Roy A. Reynolds' No. 1 East Mt. Church, cen. of 1-acre church lot, G. W. Hooper Sur. ..... Drlg. 3,200 ft.
Steen Drilling Co.'s No. 1 A. Loden, 330 ft. from W line and center of N and S lines of 27-acre lease, G. W. Hooper Sur. ..... Set surface csg.
Stroube & Stroube's No. 1 Lofton, 251 ft. from S line and 330 ft. from E line of S 40-acre of 56-acre tract, McKinney & Williams Sur. ..... Rig up.
Webster's No. 1 R. H. McClelland, 1,956 ft. E and 335 ft. S of NW cor. of 751-ac. tract, M. P. Del Torres Sur. ..... Derrick.
G. L. Wickliffe et al's No. 1 M. E. Florence, center of 41.5-ac. lease, M. Chandler Sur. ..... Top sand 3,754 ft.; testing.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3¼ miles S of Canton, M. J. DeCadena Sur. ..... S.D. 2,405 ft.
Humble Oil & Refining Co.'s No. 2 L. A. Dowade, 508 ft. W of E line and 200 ft. N of S line, William Daniel Sur. ..... Drlg. 2,000 ft.
Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... S.D. 2,300 ft.
Pure Oil Co.'s No. 2 Mirtie Elliott, 642 ft. E of W line and 350 ft. S of N line, R. H. Wiley Sur. ..... Set surface csg.
Pure Oil Co.'s No. 3 N. R. Blake, 901 ft. S of N line and 225 ft. W of E line of survey, J. Schmits Sur. ..... Drlg. 2,300 ft.
Pure Oil Co.'s No. 3 H. P. Tunnell, 835 ft. W of E line and 660 ft. S of N line of lease, James Rose Sur. .... Location.
Pure Oil Co.'s No. 4 T. D. Miller 200 ft. W of E line and 250 ft. N of S line, John Walling Sur. ..... Set surface csg.
Pure Oil Co.'s No. 9 Ella York, 250 ft. S of N line and 200 ft. W of E line of tract, John Walling Sur. .... Set surface csg.
Van Oil Association's No 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... T.D. 2,850 ft.

WOOD COUNTY

De Canther's No. 1 N. L. McLain, 350 ft. from N line and 642 ft. from E line of tract, Sam Brooks Sur.... Derrick.
Talko Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. ..... T.D. 3,188 ft.
Wood County Dev. Co.'s No. 1 Davis, approximately 130 ft. from S line of 160-ac. tract and 2¼ miles S of Kantes in Sarah McDonald Sur. ..... Drlg. 2,050 ft.

Two Extensions in Northern Duval County Which Had Shown Gas Make Good Flows of Oil

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., July 5.—Northern Duval County is still getting the major attention in Southwest Texas. Both the H. H. Coffield No. 1 Wendt, a half mile west of the Suttle discovery well, and the Southwest Drilling Co.'s No. 1 Wendt, one-half mile south of Coffield, each of which had early shown considerable gas, came in during the past week flowing a good stream of oil. This widens the field, and the general feeling is that it will be wider than the other pools in the Government Wells district. If the two wells mentioned had come in as gassers it would have been thought they marked the west limits of the field.

H. H. Coffield's No. 1 Wendt came in flowing at the rate of 245 bbls. through one-half inch choke a few hours after it started going to oil. When the Southwest Drilling Co.'s well began flowing it made 35 bbls. the first hour on quarter-inch choke and was then shut in. The field at the close of the week consists of four wells, the two mentioned and the Suttle discovery well and the Magnolia Petroleum Co.'s No. 1 Wendt, a north offset to it.

During the week a number of new locations were made. Magnolia is starting an offset to the Coffield well and is beginning east offsets both to the Suttle discovery, No. 1 Bennett, and the Magnolia Petroleum Co.'s own No. 1 Wendt.

Sun Oil Co. farmed out its acreage in the field, consisting of 160 acres, to Al Buchanan, who has started the No. 1 R. T. Ellison, a quarter mile north and a quarter mile west of the Suttle discovery well, and a quarter mile east of Seacord & Putnam's 1,574-foot discovery well. Seaboard & Putnam are starting a west offset to Buchanan.

In the Sarnosa Field, at the south end of the district, Hynes & Nessly's No. 1 Weil, one-half mile south of the group of four producers that offset each other and constitute the field, had spudded in, and Thomas & Tarver, Inc., a quarter of a mile northwest of them, was getting ready to start. Interest in this field awaits the completion of these two wells, which will probably occur within two weeks.

Late in the week the Windsor Oil Co.'s No. 1 Cummings, E half NW NE of Survey 44, topped the Cole sand at 1,560 feet and it was considered high. Not accounting for any difference in elevation, Seacord & Putnam's No. 1 Johnson, a little over a half mile west, produced gas in this sand at 1,567-74 feet, and later started going to oil.

The Byrd No. 1 Cummings topped the Cole sand at 1,553 feet, which is 9 feet higher than the sand was found in the Suttle discovery well. The Byrd test is about three-quarters of a mile northeast of the Suttle discovery well.

Saxet Finds New Sands

Two new sands were proven for oil production in the Saxet Field in Nueces County late in the week. Gulf Coast Oil Co.'s No. 2 Bessie Elder, in sand at 2,725-40 feet, came in for 150 bbls., and Hillegeist's No. 1 McGregor, in sand at 4,867-75 feet, came in for 300 bbls. of oil on three-sixteenths inch choke. Both sands are new for production, though they were not unknown to operators in the field, and showings have been had in other tests at around those depths.

In the coast counties, John F. Camp and Stanolind Oil & Gas Co.'s No. 2 King, after being completed for a big gas well at approximately the same depth as the No. 1 King, was deepened to sand at 4-010-24 feet and on drill stem test showed 800 pounds in two minutes on choke. The test shut down for a few days for orders but late in the week started deepening by coring. The first sand was topped at 3,899 feet in the No. 1 King and at 3,914 feet in the No. 2 King. The latter is 1 mile south and 1 mile east of No. 1, and the two wells are 6 miles northwest of the Agua Dulce Field.

John F. Camp is starting a new wildcat in San Patricio County, 20 miles northeast of his two gassers on the King ranch.

Another interesting feature in the coast counties the past week was the second big gas sand in the Coyle-Concord No. 1 Nelson, in southern Colorado County, which was tested for only 40 seconds on drill stem sand test. In that time it showed so much pressure that it was closed in. The first sand encountered recently was at 3,799-3,812 feet and was not gauged, but was estimated at around 2,000 pounds pressure. The new sand was encountered at 4,021-25 feet and showed a trace of oil. This is on a 20,000-acre block, of which Coyle-Concord retained 16,000 acres and Plymouth Oil Co. acquired 8,000 acres. This test was started after a great deal of money had been spent on core testing and geophysics which indicated a big salt dome.

New Webb County Pool

Rosenberg's No. 2 Laurel, in Webb County, 3 miles southwest of the Carolina-Texas Field, is not yet finally completed, but is looked upon as a very important test in that part of the county and may lead to the development of an important pool. When tubing was first run it made 60 bbls. an hour for two or three hours. It was variously estimated, but now is flowing 150 bbls. through both casing and tubing, which amounts to the same thing as flowing through open casing. When first completed with tubing and producing 60 bbls. an hour, an attempt was made to choke it down, and it is possible the tubing parted or something else happened. At any rate it is considered quite an important discovery. Sand depth is 2,240-44 feet.

The new well is on the south flank of the watershed between the Nueces and Rio Grande Rivers, which is one of the most pronounced foldings in Southwest Texas, running northwest and southeast on the west side of the escarpment which tends northeast and southwest. The Caroline-Texas Field, which has been producing oil and gas from various sands since November, 1921, is about 2½ miles northeast of the summit of the watershed and in the first re-entrant of the escarpment on the Nueces River side.

Erosions have exposed the bedding and, it is claimed, indicate parallel faulting across the watershed tending northeast and southwest. It is very evident that the new producer will bring about considerable additional drilling in that territory for there is quite a lot of acreage available, practically all of it held by independents.

In two wells drilled by Ross Jones in 1922, near the Rosenberg well, there was quite a little showing of oil at around 1,300 feet, which was as deep as they were drilled.

Starr County Activity

Gulf Coast Oil Co. made a failure the first time in setting casing in the No. 1 Frank Doyno, one-half mile north of the discovery well of the Rio Grande City Field, and when tested it got pieces of cement as well as water and oil, and casing was reset. It was ready to test again this week, and is the one item of interest in that territory. R. E. Johnson's No. 1 Seabury, 2 miles west of it, first abandoned as dry at 1,400 feet and later deepened to 1,700 feet where it got a core showing oil, failed to make a well and was again abandoned.

Outside of the No. 1 Doyno, in the Rio Grande City Field, which promises to either accelerate or dampen development of that field, the interest in Starr County is mainly in the widely scattered wildcats. Operators who went into the county attracted by the Los Olmos shallow field producing at around 400 to 500 feet did not find possibilities of the field big enough and moved out through the county and found many structures. This is the second time a wave of interest and wildcat drilling activity has swept over Starr County, the first being about five years ago.

Balcones Fault Zone

Paton Brothers' No. 1 Turner, in western Lee County, rigged up for an extra deep test to around 6,000 feet, lost the hole at 2,200 feet and has skidded the rig. This test is on the Tanglewood faul and is promised a great deal of attention and interest.

In Caldwell County two tests are at producing depths in the new Dunlap Field, but the Smilock Oil Co's No. 1 Dunlap, later taken in hand by Townes & Porter, made a failure at the first attempt to set casing and filled the casing with cement. New casing was set late in the week and it will be tested some time this week. Total depth is 2,400 feet and it is setting casing at about 2,000 feet. It is a direct west offset to the Empire Gas & Fuel Co.'s No. 1 Walker, which in turn is a south offset to the Bob Rose No. 1 Pierce, the discovery well. Trinity Drillers, Inc., are to drill the No. 1 Dunlap, a northwest diagonal offset to the No. 1 Pierce.

Bob Rose's No. 1-B Walker, with casing set at 1,720 feet, was due to drill in anytime, the casing having been set on June 22. It is about 1 mile north of the discovery well.

John F. Camp and Stanolind Oil & Gas Co. have abandoned their No. 4 Pettus in Goliad County at 4,481 feet, about 15 miles northeast of the Pettus Field in Bee County. The No. 1 Pettus, drilled by V. F. Neuhaus and Stanolind, had not enough oil to put on production at that depth and too much to leave the district without further efforts. Three tests drilled since have been dry.

It is understood the chemical plant at Corpus Christi has purchased considerable additional gas rights in the western part of the Saxet Field.

Proration gauge on the Darst Creek Field in Guadalupe for the month July 1 to August 1 fixes the potential production of 238 wells at 137,715 bbls. and the allowable remains at 18,000 bbls. A potential of 263 wells in the Salt Flats or Joe Bruner Field is 10,335 bbls. and the allowable 10,000 bbls.

Completion of the Sun Oil Co.'s No. 2 Dowdy, with potential of 585 bbls. and no b.s. or water, practically proves the new Camp area to the southwest and the Darst Creek Field as all one field. Humble Oil & Refining Co.'s No. 5-C Sue Denman, the nearest production in the Camp district, is about 1,000 feet southwest, but Humble's No. 6-C Sue Denman, 400 feet offset to Sun's No. 2 Dowdy, is now down around sand depth and running good, and when completed will make it all one field.

The Camp discovery well is about 1 mile southwest of Darst Creek production and the Sun's No. 2 Dowdy and six tests of the Humble on the Sue Denman land form a single file of producers between the discovery well and the field.

Wildcat Operations in Southwest Texas

Week Ending July 2

Company, farm and location—	Remarks:
ATASCOSA COUNTY	
American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1, Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; standing.
Glen Mathis' No. 2 Mrs. C. Martin, 100 ft. SE of No. 1	T.D. 2,980 ft.; standing.
BANDERA COUNTY	
F. A. Brown's No. 1 R. B. Watson, 600 ft. N of cen. of S line of Sec. 71	T.D. 70 ft.; drlg.
BEE COUNTY	
Humble O. & R. Co.'s No. 1 Laura Thompson, 6,360 ft. from N line, 15,100 ft. from W line of tract in Garrett Roache Sur., S part of county	T.D. 5,960 ft.; drlg.
C. F. Nichols' No. 1 J. P. Harris, Durango grant east of Tuleta	T.D. 4,075 ft.; drlg.
Texas Gulf Producing Co.'s No. 1 Webb Hearn, 1,000 ft. N, 43 degrees E, thence 300 ft. NW at right angles from Hurlburt's No. 1 Wood in P. T. Irrigation Co. Sur.	T.D. 5,954-58 ft.; cored sandy shale.
BEXAR COUNTY	
Amerada Petroleum Corp.'s No. 1 Peter Kiolbassa, 1,000 ft. from E line, 600 ft. from S line of 100-ac. tract, A. Mancho Sur., 4 miles SE St. Hedwig	Derrick.
Amsden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio	T.D. 810 ft.; S.D.
S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Perez Sur.	T.D. 900 ft.; no report.
Eckert et al's No. 1 Edwards, 150 ft. to N and W lines of farm in Martinez Sur.	T.D. 2,015 ft.; drlg.
Moore-Jauer's No. 1 Holly R. Ellison, 2,916 ft. from E line, 1,500 ft. from S line of farm in T. York Sur.	T.D. 2,170 ft.; whipstocking.
Jones & Volts' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenenes Sur., 12 miles E of San Antonio	T.D. 907 ft.; standing.
Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur.	T.D. 2,495 ft.; in Edwards, dry
Schneider, Rees et al's No. 2 Clausson, 12 miles NE of San Antonio	T.D. 1,330 ft.; S.D.

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Await Completion of More Wells to Indicate Extent and Character of Conroe Field

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., July 5.—As no additional wells reached the stage the past week to throw any light on the subject, the extent and nature of the Conroe Field of central Montgomery County remain undetermined. However, 12 rigs are actually running in the district and as several of these now are nearing the depth at which the Hockleyensis, used for the present as the marker, should be picked up, developments this week should give a fairly definite picture of the area structurally. On the other hand, it will be several weeks before any of the tests reach the horizon from which present production has been found.

Geologists and operators have been attempting to outline the field and structure, using the Hockley and other markers as found in the limited number of tests as guides, but in every instance the lack of control in virtually every direction has resulted in confusion of theories and contouring has been largely guess work. However, it is indicated that a somewhat complex condition exists with possibly two or three "highs" in the district. That the field will be of the Pettus or Raccoon Bend type is a general prediction but there are indications that it will be of more far-reaching importance than either of those two fields.

Watching Tests

Particular attention now is being directed at Rowe & Flowers' No. 1 Varner, located in the Ransom House Survey, just south of the town of Conroe and some 3½ miles to the west of the present field which late in the week was coring shale below 3,850 feet and which should top the Hockley within the next 150 or 200 feet. Although some distance from production, the depth at which it tops the Hockley will serve as an important marker or key in controlling the contours in that direction and forming a link between the producing wells and deep tests some 3 miles farther west which have proved a puzzle so far as their relationship with the rest of the wells is concerned.

Nearly all the other drilling tests hold key locations and as soon as they all top the Hockley it probably will be possible to work out a picture of the district. Kraft & Giesieke's No. 1 South Texas Development Co., T.&N.O. Survey, Block 9, will be a good marker for determining the southeasterly trend of the field, being some 5 or 6 miles from the field in that district. It is in what is known as the Outlaw area. This test late in the week was drilling shale around 3,865 feet.

Lease trading in the area has resolved itself into negotiations by several of the larger companies for the acreage held by independent operators and lease holders. Important deals, which have been rumored as under way for some time still are hanging fire. However, among trades reported during the week, although not confirmed, was the purchase by Humble Oil & Refining Co. from South Texas Development Co. of approximately 920 acres in the H. T. Littlefield, T.&N.O. No. 15 and C. A. West Surveys. This involved, it is reported, a cash payment of $92,000 with the lease carrying a one-thirty-second overriding royalty. Location of this is several miles southeasterly from production, in which direction Humble has been reported at various times as having made a number of important acquisitions. Yount Lee Oil Co. of Beaumont also is reported to have purchased approximately 320 acres of the McComb property in the L. Smith Survey, just south of The Texas Company's Moody block. The consideration in this was given as $200 per acre and $700 per acre out of oil.

Producers Shut In

The two oil wells so far completed at Conroe, Strake Oil Corp.'s No. 2 South Texas Development Co. and Heep Oil Corp.'s No. 1 Freeman, still are shut in pending connections for the disposition of the production. Humble Pipe Line Co. has not completed its 8-inch line which has been under construction between Conroe and Satsuma (on its main line) for several weeks. This line should be in operation within the next two weeks. The first two wells, which are wet gassers, are being produced for fuel with the fluid being run to a small topping plant near the field.

Two additional good wells were completed in the Rabbs Ridge Field, eastern Fort Bend County, in the salt dome district, the Humble Oil & Refining Co. and Gulf Production Co.'s Nos. 4 and 1-B George, the former being an extension of the south end of the field to the east. That well came in flowing 88 bbls. an hour, or more than 2,100 bbls. daily, and is one of the best wells completed in the field to date. Production is from sand at a total depth of approximately 5,400 feet. The other well flowed 55 bbls. hourly, or 1,320 bbls. daily, from sand at 5,310 feet.

Rabbs Ridge, now one of the most active fields on the coast, has eight rigs running. The field is undergoing a systematic development program with a view to outlining the productive area that an efficient and conservative production program might be followed by the joint owners. This field has given indication of being one of the largest coastal fields in area and one of the most prolific, and a steady string of good wells has been completed with consistent extensions to the producing area. For the next few weeks interest will center on The Texas Company's No. 1 Wolters, located in the Samuel Kennedy Survey, approximately 1,800 feet to the north of the field. Late in the week, this test was drilling below 4,700 feet and if it should find the pay it will prove the field a distance of 3 miles north and south.

Union Sulphur Well Completed

At Sulphur, Calcasieu Parish, Louisiana, Union Sulphur Co.'s No. 771 fee has been completed flowing 3,500 bbls. daily through a three-quarters inch choke from sand at 5,152-61 feet. This company's deep test, No. 1 Gulf Land (Pure lease), on the northwest flank of the East Hackberry Dome in Cameron Parish, has gone into heaving shale at a total depth of 8,365 feet. Whether to abandon the hole or try to set casing and deepen has not been determined. The latter is 1,674 feet north and 370 feet west of the same company's No. 1 Gulf land (Humble lease), which was completed in March flowing 1,500 bbls. daily from sand at 5,990-6,001 feet. These two wells and one other test now drilling, this company's No. 2 Gulf land (Humble lease), are the only tests drilled on that side of the dome, the Humble lease well being the discovery well on that flank. Previous production at East Hackberry has been on the extreme south flank of the dome and in three shallow pools on top the dome. The northwest flank production is over a mile across the dome from the other oil. The present deep test (No. 1 Pure Oil lease), however, failed to find the producing horizon of the No. 1 Humble lease well. It is farther out from the dome. The other test, No. 2 Humble lease, is drilling below 5,700 feet.

Two dry holes were reported at Markham, Matagorda County, the Southern Drilling & Production Co.'s No. 1 Hudson, which went into the salt at 3,461 feet, and The Texas Company's No. 1 Texas Pipe Line Co., which was dry in shale at 3,682 feet. Both are on the east side of the field. Julia Oil Co.'s No. 1 Gray, on the north side, tested salt water in sand at 3,623 feet but is pulling screen to deepen.

San Jacinto Well Abandoned

Seven Wells Oil Co.'s No. 1 Foster Lumber Co., H. Alsbury Survey, southern San Jacinto County, has been abandoned as dry at a total depth below 5,125 feet. This test has been watched closely because of its location along the same trend as the new Conroe Field. Humble Oil & Refining Co. and others have done considerable leasing through that part of San Jacinto County, which county adjoins Montgomery County, in which Conroe is located, to the east. The Seven Wells test, with an elevation of 199 feet, topped the Hockleyensis at 3,789 feet but is believed to be updip, which would make the Hockley low, as compared with Conroe.

Other abandonments reported during the week included Humble Oil & Refining Co.'s No. 2 McCasland, Raccoon Bend, Austin County, and Sun Oil Co.'s No. 26 Bender, northwest flank of the Humble Dome, Harris County. The former was quit at 3,700 feet and the latter at 4,577 feet, to which it was deepened from a former completion depth in a sand and shale at 3,489 feet. This well was the discovery well and so far has been the only producer on that particular sector of the dome.

Coyle-Concord Oil Co.'s No. 1 Nelson, wildcat in the I.&G.N. Survey, Section 43, Colorado County, is coring deeper in sand below 4,020 feet after encountering considerable gas. This test tried to blow out during attempts to make a drill stem test. It is on a 20,000-acre block, which was worked geophysically and on which indications of a salt dome have been given. This so far has proved among the most favorable of any tests drilled in Colorado County, which county has been unproductive to date.

United North & South Development Co.'s No. 1 Stoddard, deep test in the J. C. Kellar Survey at the edge of the Buckeye Townsite, Matagorda County, still is trying to pull screen after having failed to make a well in a sand at 7,831 feet. At present, the fishing tool also has been lost in the hole and efforts are being made to recover it. This well is watched closely, having given indication of the existence of another coastal field in that area.

Gulf Coast Fields and Wildcats

Week Ending July 2

RACCOON BEND—AUSTIN COUNTY

Company, farm and location—	Remarks:
Humble O. & R. Co.'s No. 2 McCasland, Wm. C. White Sur., 660 ft. southeasterly along SW line from NW cor. thence 200 ft. northeasterly at right angles	Dry and abnd. 3,700 ft.

BARBERS HILL—CHAMBERS COUNTY

R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	Lime 2,527 ft; waiting orders.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 520 ft. N along E line from SE cor. of tract, thence 75 ft. W at right angles, thence 75 ft. N at right angles	Location.
Mills Bennett Prod. Co.'s No. 4-A E. W. Barber, Henry Griffith League, 300 ft. W of No. 3-A, 50 ft. N of S line	Drlg. lime 3,569 ft.; salt 1,427-3,318 ft.
Mills Bennett Prod. Co.'s No. 3 Kirby, Henry Griffith League, 645 ft. E, 40 ft. S, NW cor. of tract	Shale and lime 3,123 ft.; cmtd. cavity to 1,200 ft.; salt 1,395-2,875 ft.
Mills Bennett Prod. Co.'s No. 4 Means, Henry Griffith League, 150 ft. W of No. 3	Drlg. shale and lime 3,613 ft.; salt 1,407-2,865 ft.
Moody Corp.'s No. 1 Iiffrey (W.O.), Henry Griffith League, 50 ft. from N line and 50 ft. from W line of tract	Set 57 ft. of 3-in. (O.D.) screen 5,308 ft.; comp. flowing 760 bbls. fluid, 10 per cent water, 360 lbs., ⅝-in. choke.
Rio Bravo Oil Co.'s No. 3 Fisher, Wm. Bloodgood Sur., 300 ft. E and 33 ft. S of NW cor. of tract	Drlg. rock 4,324 ft.
Sinclair Oil & Gas Co.'s No. 8 Wilburn (D.D.), Henry Griffith League	Drlg. sand and shale 4,962 ft.
Sun Oil Co.'s No. 3 Higgins, Wm. Hodges Sur., 50 ft. from E line of tr. and direct offset McAlbert Oil Co.'s No. 2-B Higgins	Drlg. rock 1,433 ft.
The Texas Company's No. 6 Wilburn (D.D.), Henry Griffith League	Drlg. shale 4,360 ft.
Texas Gulf Prod. Co.'s No. 2 Cornelia Barber, Henry Griffith League, 514 ft. W, 41.5 ft. S of NE cor. of tr.	Drlg. salt 1,534 ft.; top of salt 1,426 ft.
Texas Gulf Prod. Co.'s No. 10-H Kirby, Henry Griffith League, 30 ft. W of No. 3 Iiffrey	Cap rock 990-1,002 ft.; setting 16-in. csg.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 32 Moore, Mark Smith Sur., 560 ft. N and 560 ft. W of No. 31	Drlg. gumbo 1,756 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co. and Humble Oil & Ref. Co.'s No. 3 Booth-Meyers, John Rabb Sur., 1,500 ft. E of No. 2	Drlg. shale 4,976 ft.
Gulf Prod. Co. and Humble O. & R. Co.'s No. 2-A T. I. Booth, Samuel Kennedy Sur., 445 ft. N of S line and 575 ft. E of No. 1-A	Drlg. gumbo and lime 3,345 ft.
Humble O. & R. Co. and Gulf Prod. Co.'s No. 2 Davis, Robt. Peebles Sur., 2,483 ft. E, 150 ft. S of NW cor. of 1,000-ac. tr.	Drlg. shale and lime 2,428 ft.

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Operators of Oklahoma Further Cut Production And Are Below Permissible Output

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

An important event this week is the 40,000-bbl. decline in Oklahoma's daily average production for the week ending July 2, bringing the state's production to approximately 386,500 bbls. a day. This is considerably below the state's allowable production and indicates that the operators are co-operating in keeping the production in line with the pipe line nominations. This is believed to be the time of the year when the consumption is the heaviest and the production should be the largest.

Announcement was made of a new wildcat location in Logan County, considered to be one of the most important locations so far this year. Ramsey Petroleum Corp.'s No. 1 will drill the test in the NW cor. NE Section 16-16-4w, west of Guthrie, and about 2 miles south of the Eason Oil Co.'s No. 1 Cotcha, SE cor. NE SW Section 34-17-4w, which was completed for 365 bbls. of oil a day from 4,919-42 feet, in November, 1930. The new location is on a 317-acre lease owned by the Oklahoma City Duck Club and is in a block of several thousand acres owned by Ramsey Petroleum Corp. A number of major companies have acreage close to the block.

The Eason Oil Co.'s well opened a new producing territory in Logan County, and it was shut down through an agreement with the lease owners and royalty owners, and has been produced only intermittently since it was discovered. The Ramsey Petroleum Corp. announces that it has several other blocks of acreage in Oklahoma on which drilling deals are pending.

Reduced Shipments

The first indication that the purchasers were planning to reduce crude oil shipments from the Oklahoma City Field was when the Oklahoma Pipe Line Co. announced it would reduce its takings 5,000 bbls. a day July 1. The company had been handling 22,000 bbls. daily and it reduced its nominations to 17,000 bbls. daily. Whether the reduction will continue throughout the month is not known.

Other major purchasers had not made any changes by July 1, but it was believed that some of the others would announce changes within a week or possibly carry through until the present proration period expires July 15.

Deep Holes Plugged Back

The two operations surrounding the wildcat well in the West Konowa Pool in Pottawatomie County have been dry holes in the deep formation and after these tests were plugged back to the shallow horizons they were only showing a small quantity of oil.

Magnolia Petroleum Co.'s No. 1 School Land, NE cor. NW Section 36-6-4, a half mile south of the discovery well in the West Konawa Field, was cleaned out to 2,955-3,000 feet, where the fluid rose 700 feet in the hole in five hours.

Arrow Drilling Co. and others' No. 1 Noble, NE cor. SE SE Section 26-6-4, flowed 43 bbls. of oil in 45 minutes from the pay at 2,900-15 feet, and the casing collapsed. This test had water in the deep formation at 3,910 feet and was plugged back.

Potential tests on wells in the southwestern end of the Oklahoma City Field made on recent completions indicate that these wells are nearing the edge of the Wilcox sand pay. The proposed drilling campaign in that area has been postponed indefinitely.

In the north end of the field Grison Oil Co.'s No. 1 Turner, NW cor. SW SE Section 34-12-3w, flowed 14,837 bbls. of oil in four hours and some of it going into the pits. It has been given an adjusted potential of 29,494 bbls. a day, under the Oklahoma Corporation Commission's rulings. This well was completed on May 4, and flowed 630 bbls. of oil and 136 bbls. of sand in 19 minutes before cutting the connections. Later it flowed 3,250 bbls. of oil and 425 bbls. of sand in one hour. The gas is estimated at 70,000,000 feet a day. The total depth of the well is 6,530 feet and the 9-inch casing is landed at 6,330 feet.

Denver Producing & Refining Co.'s No. 1 Larkins, SW cor. NW NE Section 22-11-3w, in the southwest edge of the field flowed 1,778 bbls. of oil in four hours and was given a potential of 3,556 bbls. a day. The well was completed May 11 for 185 bbls. of oil in 15 minutes. The total depth of the well is 6,535 feet with the 7-inch casing landed at 6,464 feet.

R. A. McArthur's No. 1 Pruitt, SE cor. NW SE Section 22-11-3w, which extended the production in the field a half mile to the west when completed, has a potential of 11,643 bbls. a day and except for a few wells in the extreme southeast part of the field is the largest producer in this district. The completion of this well caused a rush of new operations into the town lot territory.

Phillips Petroleum Co.'s No. 1 Beighler, NW cor. SE NE Section 22-11-3w, was given a potential of only 398 bbls. a day. The Harrell-Davis Oil Co.'s No. 1 Fish, SE cor. NE SE SE Section 22-11-3w, was given a potential of 2,768 bbls. a day.

The first well to test the paying horizon on the west side of Section 22-11-3w, is expected to be the Grison Oil Co.'s No. 1 Little, NE cor. NE NE SW Section 22-11-3w, which has cemented the casing at 6,570 feet.

The southwestern part of the Oklahoma City Field was expected to be defined and the future of the Wilcox sand production from that district across the extreme southwest corner of the field will be known in a few days.

Indian Territory Illuminating Oil Co.'s No. 1 Wickline, SW cor. NW Section 26-11-3w, has landed the 7-inch casing at 6,535 feet, and is shut down. The test is located about a half mile south of the same company's No. 1 Little, which aided in extending the production in the field, when it was completed. It is also a half mile west of the Phillips Petroleum Co.'s No. 1 Berg, which also extended the production.

In the north end of the field, Jacobs Oil Co.'s No. 1 Sinopoula, SW cor. NE SE Section 34-12-3w, flowed 3,318 bbls. of oil in two and one-half hours to complete its final four-hour initial test to a total of 5,528 bbls. of oil It found the Wilcox sand at 6,276-6,479 feet.

Another well cut its connections and threatened to go wild but was shut in. It is Slick-Urschell's No. 6 Terminal, NE cor. NW NW Section 3-11-3w, which cut connections while taking its initial test, making 562 bbls. of oil in six minutes. Another attempt was made the next day and the well cut out again. On its original test it made 4,510 bbls. of oil in 1 hour and 35 minutes, with an estimated 118,000,000 feet of gas a day.

Near a Balance in June

It is believed that the new proration board for the Oklahoma City Field will face conditions in regard to underproduction that Ray M. Collins confronted when he took charge of the proration in the Oklahoma City Field last February. This was indicated when available figures for most of the month of June were compiled. Production and oil shpiments have been below the allowable.

The board, which is to be headed by Lieut. Col. Cicero I. Murray, as commanding officer of the militia in charge of proration enforcement, will be selected by operators at a general meeting to be held July 7, after which it will be subject to the approval of Governor Murray.

The total daily average allowable production was fixed at 102,113 bbls., which included carrying over current underproduction from the last month, new wells and the 97,300 bbls. fixed by the commission's order. The average daily production for the first 29 days of June was 100,313 bbls. The pipe line and tank car shipments from the field averaged 100,725 bbls. in the first 28 days of the month. This indicates the oil production and the movement of oil were almost balanced.

Some express the opinion that after the first of July the movement of oil from the field will be in the neighborhood of 87,000 bbls. per day. If this condition develops the underproduction status of the field is expected to show an increase. Lease stocks totaled 549,105 bbls. on the first of June.

Controlling the Trucking Trade

The first order issued by Lieutenent Colonel Murray was directed at trucks and tank wagons. The order requires permits to haul crude oil from leases in the Oklahoma City Field. Picking up and hauling crude oil is prohibited during the night, except in extreme cases and where permits have been granted. It is believed this step was made to prevent illicit production and sale of oil. The order is as follows:

"All firms or individuals hauling crude oil in tank wagons in the Oklahoma City Field are hereby ordered to obtain permits from the military authorities at once.

"Names of firm or individual license tag number and capacity of tank must be furnished at the time of application.

"Application will be made to commanding officer at field military headquarters, located on the Ben Theimer lease.

"All firms or individuals will turn in a daily report to field headquarters, showing date oil was hauled, lease name and well number, number of barrels hauled and to whom delivered.

"Hauling of oil in tank wagons will not be permitted between the hours of 8 p.m. and 6 a.m. except in cases of extreme emergency and only on written authority of the commanding officer."

Outside Tests Planned

Indications point to the possibility of two wildcat operations for Oklahoma County before the end of the year. The first of these to get under way may be located on the block of acreage lying in the south part of Township 14-1w, and in the north part of Township 13-1w. This block was assembled by W. H. Atkinson and others and a half interest sold to Slick-Urschel, Inc., who later sold or assigned a half interest to the Sinclair Prairie Oil Co. A contract for the drilling of a well has been extended for 30 days from June 20. It is believed that negotiations are underway between these companies to drill a well somewhere on this block.

On the northwest edge of Oklahoma City, the Carter Oil Co., Gypsy Oil Co. and the Sinclair Prairie Oil Co. are unitizing their holdings. It is believed this is being done with the view of drilling a well some time before the end of the year. The Carter Oil Co. has the largest holdings and within the past few weeks the three companies have assigned percentage interests to each other in Sections 1 and 12-12-4w. Most of the leases in this block have about three years to run.

The Shell Petroleum Corp.'s No. 6 McCully, NE cor. SW SE Section 30-19-4w, in the Roxana Pool, in northeastern Logan County, which was drilled deeper from a total depth of 5,944 feet, where it was an exhausted producer, found what is believed to be the School Land sand, similar to that found in the Oklahoma City Field at 6,097-6,150 feet, with a showing of oil and gas. The gas was strong enough to blow the tools up the hole, kinking the line, resulting in a fishing job.

Slick-Urschel, Inc., has taken over the remaining half interest in a block of acreage near El Reno in Canadian County. The block was originally assembled by Ramsey Petroleum Co., which later sold a half interest to Slick-Urschel, Inc., some time ago, recently transferring the remaining half interest. Acreage included in the block is as follows: NW Section 6-12-6w, E half SW and Lots 3 and 4 of Section 18-13-6w, E half NW and Lots 1 and 2 of Section 31-13-6w, SW Section 10-13-7w, E half SW Section 14-13-7w, N half SW Section 26-13-7w, and Lots 1 and 2 and NW Section 28-13-7w.

In the territory south of Duncan in Stephens County, southern Oklahoma, activity shows an increase with three new operations reported. A number of producing wells have been completed in this new pool since the first of the year. One new producer was added to the area. It was the Curtis Oil Co.'s No. 4 Dare, NW cor. NE NE SE Section 2-2s-8w, an inside location, which made 40 bbls. of oil from sand at 1,400-43 feet.

The new operations include T. W. Medlin and others' No. 1 P. H. Peck, NW cor. NE Section 11-2s-8w, offsetting a producing well. W. J. McCalister and others' No. 1 Dare, SW cor. NW Section 1-2s-8w, also offsetting a producer. Meridian Oil Co.'s No. 2 Peck, NW cor. NW NW SW Section 1-2s-8w.

Linson & Loofbourrow's No. 1 Dare, SW cor. NW NW Section 1-2s-8w, an old test that was temporarily abandoned at a total depth of 1,755 feet by Crane and Rankin, is rigging up to drill deeper.

A wildcat test about 5 miles north of the Tonkawa Field in Kay County found 10,000,000 feet of gas and has been shut in. The test is Blubaugh and others' No. 1 Vanselous, C NW NE Section 30-25-1. It found the Tonkawa sand at 2,557-64 feet, where it made 10,000,000 feet of gas a day. It is located on a block of 600 acres.

Southern Grady County was attracting attention again after the disappointment of the dry hole which was recently completed in that area. The English Drilling Co.'s No. 1 Heenan-Coe, NE cor. SE NE Section 32-3-7w, found a saturated core in the formation at 2,685-94 feet. Drilling operations were suspended to land casing

6-Cylinder 1200-hp. McIntosh & Seymour Engine fitted with step-up gears, to drive the two centrifugal pumps at a speed of 2200 r.p.m.

For driving centrifugal pumps in pipe-line stations

THE above is one of two similar units purchased in the same order with two larger (1525-hp.) McIntosh & Seymour Engines, also for driving centrifugal pumps, and after the same owners already had three 750-hp. McIntosh & Seymour Engines in service driving smaller centrifugal pumps.

The purchase here of additional and larger units for driving more centrifugal pumps indicates the thorough success of this new development in the oil pumping field.

Centrifugal pumps driven by good Diesel engines through speed-increasing gears are admirably adapted to oil pipe line needs and offer very substantial savings in buildings, foundations, and auxiliary equipment. They are quickly installed in case of an emergency, can be operated at low cost with delivery flexible to the demand, are dependable for long heavy load runs, and are easily and quickly moved to new locations. The modern units are so reliable that some stations are designed without spare capacity, and the practical unit size is much larger than with an engine direct-connected to a reciprocating pump.

McIntosh & Seymour Engines have been the recognized leaders for oil pumping power from the days of the earliest commercially profitable pipe lines, and have been developed to meet all operating requirements. Well standardized types and sizes are available for driving whatever pumps are best adapted to the individual station requirements, and our Engineers co-operate in correct selection for satisfactory service.

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New York Washington, D. C. Chicago Minneapolis
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McINTOSH & SEYMOUR DIESEL ENGINES

on top of the sand at 2,685 feet preparatory to making a test of the oil showing. While drilling the test found a showing of gas at 2,234-47 feet.

Interest in Grady County began to wane as the result of the failure of the Carter Oil Co. and others' No. 1 Carson, SE cor. Section 12-3-8w, a unitized test which was dry at 4,991 feet. It was abandoned.

The Simpson sand extension area to the St. Louis Pool, in southern Pottawatomie County, has another producer. During the week the Noble Drilling Co.'s No. 1 Lucas, NW cor. Section 2-6-4, found the sand at 4,220-65 feet, where the well made 500 bbls. in nine hours. The well first found oil in the Viola lime, and it showed an increase of about 15 bbls. an hour after it found the Simpson. A test to the west of the Noble Drilling Co.'s new well found water in the Simpson sand, indicating the area will not be productive over many acres. The test was Magnolia Petroleum Co.'s No. 1 Martin, SE cor. NE SW Section 34-7-4, which found the Simpson at 4,294-4,322 feet. It was abandoned.

A gas well completed about a year ago in the County Line Pool, in eastern Lincoln County, was opened during the week and showed oil. This well made 21,000,000 feet of gas a day and was shut in. When opened for a test it made 27 bbls. of oil in an hour. The well widens the oil producing area in the pool. The well was Truax and others' No. 1 well, NE NW Section 12-15-6. It will be cleaned out and drilled deeper into the Wilcox sand. There are three completed oil wells in the pool: Pure Oil Co.'s No. 1 Oglesby-Pinkston in Section 1-15-6, Stanolind Oil & Gas Co.'s No. 1 Bowers, and Gypsy Oil Co.'s No. 1 Pinkston, both in Section 1-15-6. The three wells were originally completed as gas wells and recently drilled deeper into the Wilcox sand.

Creek County

N. D. Christian and others' No. 1 Mack, SE cor. NE Section 7-18-9, is a rig. Gray Oil Co.'s No. 7 Leader, CNL NE NE Section 3-18-11, was rigging up. Bailey and others' No. 1 Lewis, NE cor. SW SW Section 18-19-9, was spudding. Hughes and others' No. 4 Flinchum, SE cor. NE SW Section 11-19-9, was completed for 25 bbls. after a 40-quart shot in sand at 2,143-53 feet. Gled Oil Co.'s No. 5 Hamilton, SW cor. NW NE Section 29-19-9, made 45 bbls. of oil after a 180-quart shot from sand at 2,194-2,233 feet. H. U. Bartlett and others' No. 1 Bartlett, SE cor NE SE Section 26-18-9, (OWDD) total depth 2,615 feet, was plugged back to 2,380 feet and then redrilled deeper to 2,510 feet and abandoned. Dake Brothers and Hughes' No. 1 Strip, SW cor. NW Section 18-14-9, was abandoned after finding water in the Bartlesville sand at 2,750-2,827 feet.

Hughes County

Monahan and others' No. 1 Narconay, NW cor. SW Section 10-7-8, is a rig.

Pawnee County

S. Williams' No. 2 Dickinson, SW cor. SE NW Section 1-20-8, is a location.

Kay County

Carter Oil Co.'s No. 1 Hayes, NW cor. SE Section 15-27-3, was cleaning out at a total depth of 3,103 feet.

Osage County

Mid-Co.'s No. 24 (Twin), SE cor. NE SE Section 18-22-10, was abandoned at a total depth of 1,920 feet.

Oklahoma County

Phillips Petroleum Co.'s No. 1 Micks, NW cor. NE SW Section 15-11-3w, is a rig. Mexhoma Petroleum Co.'s No. 1 Meyers, SW cor. NW NW Section 2-11-3w, flowed 2,870 bbls. of oil in three hours from the Wilcox sand at 6,265-6,379 feet. Anderson & Prichard's No. 2 Rayhill, NW cor. SE NE Section 10-11-3w. flowed 7,169 bbls. of oil in 2 hours and 25 minutes from Wilcox sand at 6,321-6,475 feet. Marion Oil Co.'s No. 1 Rook, C NW NW Section 10-11-3w, made 2,037 bbls. of oil from the Wilcox sand at 6,360-6,503 feet.

Okmulgee County

A. E. Basinger's No. 1 Postoak, NW cor. NE SW Section 6-14-11, is a location. Curtis Oil Co.'s No. 1 Berryhill, NE cor. NW NE Section 17-14-13, is a location.

Pottawatomie County

Magnolia Petroleum Co.'s No. 2 Davis, NE cor. Section 15-7-4, (OWDD) made 385 bbls. a day from the Wilcox sand at 4,134-38 feet. Hilton Phillips and others' No. 1 Brister, SW cor. SE Section 21-7-4, is a rig.

Carter County

Schermerhorn-Ardmore Oil Co.'s No. 9 Wilson, CNL NE SE Section 23-4-3w, was drilling at 600 feet. Kanaco Oil Co.'s No. 3 Coffey, NW cor. NE SE NW Section 25-4-3w, was drilling at 610 feet.

Jefferson County

Southern Oil Co.'s No. 1 Seay, SE cor. NW SE Section 2-7s-5w, is a rig. Same company's No. 3 Seay, NW cor. NE NE Section 10-7s-5w, made 75 bbls. of oil from sand at 1,240-56 feet. Same company's No. 4 Seay, NW cor. NW NE NE Section 10-7s-5w, was completed for 40 bbls. of oil from 1,090-1,102 feet. Farlyn Oil Co.'s No. 2 W. D. Seay, C SW SE SE Section 3-7s-5w, made 65 bbls. of oil from 1,086-1,100 feet. Same operators' No. 3 Seay, CWL SE SE Section 3-7s-5w, made 102 bbls. of oil from 1,237-52 feet.

Marshall County

G. W. Gore's No. 1 Willis, SW cor. Section 1-7s-5, is a machine. C. M. Carroll's No. 2 Little, SE cor. NE Section 25-7s-5, is a machine. J. T. Hogan and others' No. 1 Thompson, NE cor. NW NE Section 26-7s-6, is a location. Mitchell & Kilborne's No. 1 McDuffee, NW cor. SE NW SW Section 11-7s-6, is spudding. Trevelyn Oil Co.'s No. 1 Steele, NW cor. SE NW SW Section 11-7s-6, was spudding. Kingston Oil Co.'s No. 1 Johnson, NE cor. SW Section 31-7s-6, was spudding. Davis and others' No. 1 Colby, SW cor. NW Section 32-7s-6, was spudding. Cooper & Wickliff's No. 1 Massey, NW cor. SW SE Section 29-6s-6, was drilling at 100 feet. C. M. Carroll's No. 1 Little, SE cor. NE NE SE Section 25-7s-5, made 15 bbls. of oil from 512-16 feet. Collins and others' No. 1 McDuffee, NE cor. NW SE SW Section 3-7s-6, was completed for 3,000,000 feet of gas a day from 791-812 feet. Liggitt and others' No. 2 McDuffee, CSL NE SW Section 3-7s-5, Twin, was completed for 40 bbls. of oil from 806-09 feet. Kingston Oil Co.'s No. 1 Adams, NE cor. SW SW SE Section 31-7s-6, made 20 bbls. of oil from 539-46 feet.

Stephens County

McAllister's No. 1 Dare, SW cor. NW Section 1-2s-8w, is a rig. Continental Oil Co.'s No. 3 Dare, SW cor. SE Section 2-2s-8w, is a rig. Gillette Brothers' No. 1 Cooley, NW cor. SE NW Section 17-2s-8w, is a rig. McAllister's No. 1 Blake, NW cor. NE SW Section 16-1s8w, is a rig. Stogner's No. 1 Peck, SW cor. NW Section 1-2s-8w, made 40 bbls. of oil from 1,456-61 feet. Chambers and others' No. 4 Dare, CNL NE SE Section 2-2s-8w, was completed for 25 bbls. of oil from 1,400-43 feet. G. Pace's No. 11 Houston, SE cor. SW Section 2-2s-8w, was drilling at 1,400 feet. Same operator's No. 4 Pitts, NE cor. SE Section 2-2s-8w, was completed for 15 bbls. from 1,525-39 feet. Same operators' No. 12 Watkins, NE cor. SE NE SE Section 21-2s-7w, made 140 bbls. of oil at 1,728-36 feet. Same operator's No. 13 Watkins, SE cor. NE NE SE Section 21-2s-7w, made 100 bbls. from 1,732-38 feet. Same operators' No. 14 Watkins is a rig. Same operator's No. 2 Bristow, NW cor. NE SE SE Section 18-2s-7w, was drilling at 1,442 feet. King and others' No. 1 School land, NE cor. NW Section 36-1s-9w, was shut down at 1,878 feet. Egger-Pierce's No. 1 Bartley, NE cor. SE NE Section 20-1s-8w, was abandoned at 2,385 feet. Chamberlain's No. 1 Parker, NE cor. SE SE Section 11-2s-8w, made 4,500,000 feet of gas at 1,465-1,503 feet. Madlin's No. 1 Moore, NE cor. NW Section 11-2s-8w, made 75 bbls. of oil a day from 1,990-97 feet.

Pontotoc County

Stanolind Oil & Gas Co.'s No. 2 Allen,

NE cor. Section 32-5-5, is a rig. Same operator's No. 1 Allen, NW cor. SE NE Section 32-5-5 (OWDD), was abandoned at a total depth of 1,702 feet.

Seminole County

Spears Drilling Co.'s No. 1 Smith, SW cro. NW Section 18-9-6, was digging a cellar. Amerada Petroleum Corp. and others' No. 2 Chase, SE cor. NE SW Section 29-9-6, made 2,334 bbls. of oil on the air lift from Wilcox at 4,066-94 feet.

McIntosh County

Harman Oil Co.'s No. 6 Porter, SE cor. NW SW Section 3-12-14, was abandoned at a total depth of 1,745 feet.

Wildcat Operations in Oklahoma

NORTHERN OKLAHOMA

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 12-27-11w	S.D. 1,222 ft.
J. W. Bailey's No. 1 Acre, SW cor. NE Sec. 14-24-11w	S.D. 5,502 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w	Rig.
Price-McFann's No. 1 Webster, C SW SW Sec. 34-8-26w	T.D. 2,344 ft.; plugged back to 1,890-1,900 ft.; 1,500,000 ft. gas.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w	S.D. 2,550 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	S.D. 3,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w	Drlg. 280 ft.
Washoma Oil Co. et al's No. 1 Phillips, C NW SW Sec. 13-19-10w	S.D. 5,115 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft.

CHEROKEE COUNTY

La Piere et al's No. 1 Woods, C SE SE Sec. 27-17-21	S.D. 1,504 ft.

COAL COUNTY

Radial Oil Co.'s No. 1 McGraw, NE NW Sec. 2-1s-8	S.D. 1,450 ft.

COMANCHE COUNTY

T. E. Bradley et al's No. 1 Pruitt, NE SW SE Sec. 8-1-9w	S.D. 1,600 ft.
G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	S.D. 1,450 ft.

CREEK COUNTY

E. L. Jillson et al's No. 1 Starr, SE NW, Sec. 18-15-8	Drlg. 400 ft.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w	Location.

ELLIS COUNTY

L. C. Hierek's No. 1 Roper, C SE NW Sec. 21-20-24w	Rig on ground.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE, Sec. 32-3-7w	Fishing 1,900 ft.
Schoonmaker et al's No. 1 Station, NW cor. 35-4-6w	S.D. 40 ft.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	S.D. 5,850 ft.

GREER COUNTY

Dovell et al's No. 1 Capell, NW cor. Sec. 1-7-22w	5,000,000 ft. gas 1,455-65 ft.; T.D. 1,760 ft.
French's No. 1 Murphy, SW NW Sec. 23-7-21w	S.D. 1,645 ft.

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19	S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9	S.D. 200 ft.

KAY COUNTY

Bluebaugh et al's No. 1 Indian, C NW NE Sec. 30-25-1	Drlg. 2,520 ft.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1	Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2	S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w	Rig on ground.

KIOWA COUNTY

Christian's No. 1 Jones, NE SE Sec. 8-7-18w	C.O. 1,200 ft.

LATIMER COUNTY

P. English's No. 1 Unknown, NW SE Sec. 16-6-19	S.D. 1,542 ft.

LINCOLN COUNTY

Hilton Phillips' No. 1 Phillips, SW NW Sec. 2-14-3	Show oil and water; 6-in. csg.; swabbing; T.D. 5,050 ft.; P.B. to 4,055-78 ft. to cement off water.
Mote et al's No. 1 School Land, NW cor. Sec. 36-17-5	S.D. 3,570 ft.

NOBLE COUNTY

Wentz Oil's No. 1 Wolff, C SE NW Sec. 17-20-2w	Rig.

OKLAHOMA COUNTY

Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-2w	S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w	S.D. 5,515 ft.

OSAGE COUNTY

Mohawk Oil Co.'s No. 1, NE cor. Sec. 10-26-9	Location.

PAWNEE COUNTY

Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5	S.D. 1,950 ft.

PITTSBURG COUNTY

Ruby Ann Oil Co.'s No. 1 George, CEL NW SE Sec. 3-4-16	Show gas 1,116-37 ft.; T.D. 1,382 ft.; 25,000 ft. gas, comp.
J. Morrison's No. 1 Fowler, NE SE Sec. 13-7-17	Rig.
C. Kennedy's No. 1 Travis, C SW NE Sec. 15-7-14	Rig.
Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14	S.D. 450 ft.

PONTOTOC COUNTY

Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6	Location.
Vanderslice's No. 1 Meredith, NE SW, Sec. 17-2-4	S.D. 230 ft.
Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-8	Spudding.

POTTAWATOMIE COUNTY

Brown et al's No. 1 Sauter, NW cor. Sec. 35-11-4	Digging cellar.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w	S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w	S.D. 3,420 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 33-9-17w	Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w	Show oil 2,459-67 ft.; S.D. 2,757 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18	S.D. 1,770 ft.

OKLAHOMA PANHANDLE

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1E	T.D. 4,720 ft.; to cement.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Morris et al's No. 1 Ray, NE NW NE Sec. 8-2S-12	S.D. 256 ft.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 13-3s-10	Fishing 1,967 ft.

BRYAN COUNTY

Hughes' No. 1 Ayres, NE SW Sec. 20-7S-7	Drlg. 220 ft.

JEFFERSON COUNTY

Smith's No. 1 McCarty, SE NW NE Sec. 18-4s-8w	Location.

MARSHALL COUNTY

Trallkill et al's No. 1 Spence, NE NW Sec. 10-7s-6	Drlg. 822-36 ft.; show oil.
Liggett et al's No. 1 McDuffee, SE NE Sec. 3-7s-5	Pumping 20 bbls. 805-09 ft.; no gauge.

McCURTAIN COUNTY

Prassell et al's No. 1 Wagoner, SE NE Sec. 5-8s-27	Show oil 560 ft.; 620 ft., S.D.
Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9s-25	Drlg. 2,735 ft.

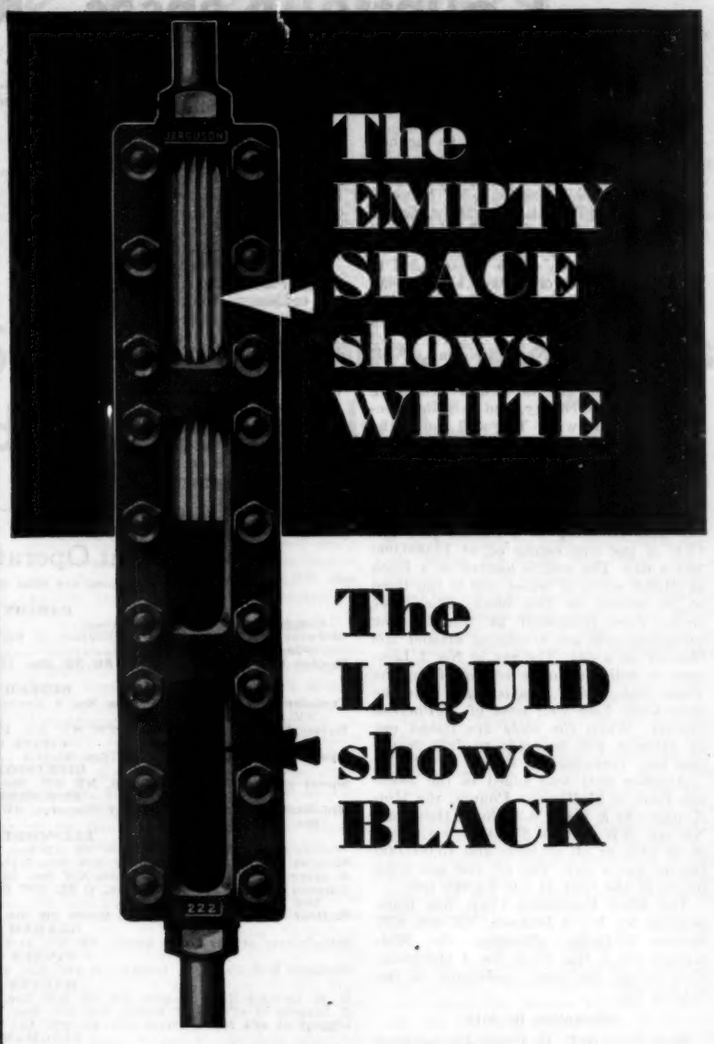
PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18	S.D. 1,950 ft.

STEPHENS COUNTY

Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-2s-8w	Location.
George's No. 1 Ryan, NW SW NE Sec. 31-3-15	S.D. 510 ft.

This gage shows in *BLACK* and *WHITE*



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Another Gusher in the Hollow Pool, Harvey County, Kansas, Results in Proration

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

Another gusher was added to the new Hollow Pool in Harvey County, making that area the most promising in the state. Mid-Kansas Oil & Gas Co.'s No. 1 Doerkson, SE cor NE Section 19-22-3w, flowed 237 bbls. of oil the first 55 minutes. It is the fourth well, and the largest completed, in the pool, which is estimated to have a potential of 10,000 bbls. a day from the four wells. The oil in the Mid-Kansas well was found in the Hunton lime at 3,474-88 feet.

Skelly Oil Co.'s No. 1 Leisman, C SE SW Section 30-27-10w, Kingman County wildcat, found gas in a new producing horizon for the county, and extended production to the west. The well found the Viola lime at 3,922-25 feet. While drilling out cement plug at 3,925 feet, the strong gas pressure blew out the last 12 feet of the plug, blew the tools up the hole and kinked the line, resulting in a fishing job. The flow of gas was estimated at 13,000,000 feet a day. The well is located on a block of 21,000 acres of leases and is the third to be drilled on this block. The other wells were completed in the Lansing formation and are averaging around 250 bbls. of oil a day. The gas in No. 1 Liesman is believed to be coming from the Viola lime, and if this is right it is the first Viola lime well west of McPherson County. When the tools are fished out an attempt will be made to drill deeper into that formation in search of oil.

Another well was added to the Johnson Pool, in McPherson County, the Mid-Kansas Oil & Gas Co.'s No. 1 Helstrom, NE cor. NW Section 35-19-3w, estimated at 40 bbls. of oil an hour and 10,000,000 feet of gas a day. The oil and gas were found in the chat at 2,974-3,049 feet.

The Shell Petroleum Corp. has made location for No. 3 Johnson, NE cor. SW Section 35-19-3w, offsetting the Mid-Kansas Oil & Gas Co.'s No. 1 Helstrom. This brings the total operations in the field to 15.

Allowables in July

State Umpire L. R. Pickrell announced that the allowable production from the Viola lime wells in the Ritz-Canton-Decker Field in McPherson County was reduced July 1, due to reduction of the nominating companies. All wells excepting those receiving the minimum allowable of 500 bbls. was reduced from 6.3 per cent to 6 per cent. The daily allowable on all the chat wells except those receiving the minimum allowable of 100 bbls. was reduced from 8 per cent to 5 per cent. The pipe line nominations for the first part of July were as follows: Shell Petroleum Corp., 3,600 bbls.; Phillips Petroleum Co., 3,000 bbls.; White Eagle Oil Corp., 2,000 bbls.; Skelly Oil Co., 1,000 bbls.; Stanolind Crude Oil Purchasing Co., 900 bbls., and Texas-Empire Pipe Line Co., 200 bbls.

Deep Test in Oxford

The Oxford city oil ordinance limiting one well to a block was repealed at a special election held during the week. The original ordinance cost a fortune in litigation before it was sustained in the U. S. Supreme Court in March, 1929. At a special election the citizens of the town voted 223 to 121 to repeal the ordinance.

The ordinance was repealed to permit independent operators to drill a deep test on the townsite. L. M. McCammon and W. Huggins plan to drill a test well to the deep formations below the Stalnaker sand, which is found around 2,200 feet.

When the oil development began on the townsite in 1927 the Shell Petroleum Corp. then owned the leases on all except fractional tracts or lots. The Shell planned to drill all its wells on regular locations but this was upset when the owners of these fractional tracts started to drill on their lots which the Shell had been unable to lease.

When the independent operators started to drill the Oxford city council passed an ordinance limiting the drilling of wells to one on each city block. It is estimated that a total of 40 wells were drilled on the townsite to the Stalnaker sand, but none of these ever reached the Wilcox sand.

With the production of these wells on the townsite steadily declining there is no new activity on the townsite, but with the drilling of a deep test it is hoped to revive the development.

The Kansas Public Service Commission has issued an order curtailing the production from the wells in the Hollow Pool, in Harvey County, to 50 bbls. per well.

The commission, after a hearing on June 27 when all the evidence in regard to the discovery well was considered, found that F. Hollow's No. 1 Church Acre, SW cor. NW Section 20-22-3w, located on a one-acre tract, has been producing since January 25. The Stanolind Oil & Gas Co.'s No. 1 Froese, SW cor. NW Section 20-22-3w, Harvey County, directly offsetting the Church Acre well, and two other wells, all owned by separate producing companies, have been recently completed directly offsetting the discovery well.

The commission further found that in order to prevent inequitable or unfair taking from such a common source of supply and to prevent unreasonable discrimination therein, all production from all wells should be limited to 50 bbls. per day for a period of 10 days for the purpose of giving the operators an opportunity of mutually agreeing upon a fair basis of equalization of overproduction, and the future allowable production to the pipe line nominations.

The commission further said that if the operators were unable to agree on or before July 8 on a fair basis of equalization of the overproduction and future allowable production to pipe line nominations, the matter would be set for hearing on July 13 at Wichita, at which time the commission will fix a basis of equalization of the production and arrive at a reasonable allowable for future production. The commission found that the offer of F. H. Hollow and others to share their oil transportation facilities from the field does not constitute a purchaser's nomination as is commonly practiced in other areas in the State of Kansas. By a mutual agreement of the producers in that field no demand for potential tests will be made, and the market outlet will be shared for 90 days on a per-well basis.

The decreased demand for Kansas crude oil makes it necessary to curtail this flush production. It appears unlikely that the demand in Kansas will increase during the summer. The potential of the state is increasing because of completion of new wells made necessary by offsets already completed and because of the large number of leases, which now have to be drilled in order to save the leases from expiration.

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location—	Remarks:
Midwest Ref. Co.'s No. 7 Scheufler, C SW SE Sec. 9-20-11w	Drlg. 3,070 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE, Sec. 16-19-14w	Set liner 3,530-46 ft.; show oil; C.O. 3,600 ft.

BUTLER COUNTY

Cameron-Great Basin Oil Co.'s No. 1 Lardson, C SE NW Sec. 13-28-2	Spudding.
Ramsey's No. 1 Michael, SW NW NW Sec. 18-27-3	Drlg. 1,570 ft.

CHASE COUNTY

Ryan et al's No. 1 Lipp, C SE Sec. 35-18-6	S.D. 625 ft.

DICKINSON COUNTY

Severe et al's No. 1 Lavengood, NE SW, Sec. 13-13-2	S.D. 4,752 ft.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE, Sec. 20-24-18w	Drlg. 3,980 ft.

ELLSWORTH COUNTY

Walker et al's No. 1 Remley, SW SE NE Sec. 23-14-7w	Rig.
Slick et al's No. 1 Dreford, SW NW Sec. 7-17-10w	S.D. 700 ft.
R. Gear et al No. 1 Kroboth, SE NW Sec. 13-15-10w	S.D. 50 ft.
Johnson Vickers' No. 1 Clausson, C SE NW Sec. 31-15-10w	Drlg. 3,030 ft.
R. Gear et al's No. 1 Sanberth, C SW SE, Sec. 29-16-9w	S.D. 50 ft.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w	Rig.

FINNEY COUNTY

National Ref. Co.'s No. 1 Wells, C SW, Sec. 13-23-36w	Drlg. 5,140 ft.

HARVEY COUNTY

D. R. Louck's No. 1 Regier, SW SE NW, Sec. 9-22-3w	Drlg. 3,197 ft.
J. Liggett et al's No. 1 Vessel, NE SW, Sec. 3-23-3w	Loc. abnd.
Liggett et al's No. 1 Davis, SW SE NE, Sec. 7-24-1	S.D. 2,500 ft.

KINGMAN COUNTY

Panhandle Drlg. Co.'s No. 1 Wetheral, C SE NW SW, Sec. 20-28-10w	12-in. csg. 1,610 ft.; S.D.

McPHERSON COUNTY

Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-3w	Drlg. 465 ft.
Detrick's No. 1 Dalke, NW SE Sec. 16-19-1	S. D. 50 ft.
Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1n.	Rig on ground.
Simmons-Canary's No. 1 Krehbiel, SE NW Sec. 33-18-1w.	Drlg. 2,480 ft.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE, Sec. 32, 34-41w	T.D. 3,640 ft.; temp. abd.

MORRIS COUNTY

Urschel et al's No. 1 Berauch, NW SE NW, Sec. 10-17-7	S.D. 915 ft.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w	Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW, Sec. 21-14-15	S.O. 2,190-2,200 ft.; temp. abnd.

PHILLIPS COUNTY

Hall et al's No. 1 Donaldson, C NE NE, Sec. 25-5-18w	Fishing 3,365 ft.

PRATT COUNTY

Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE, Sec. 28-27-11w	Rig.

RAWLINS COUNTY

J. G. Durham et al's No. 1 Weaver, SE cor., Sec. 3-2-35w	S.D. 3,925 ft.

RENO COUNTY

National Union's No. 1 Hill, NE SE Sec. 18-24-4w	Location.
Martin et al's No. 1 Yadu, C NW NW, Sec. 15-24-5w	S.D. 318 ft.

RICE COUNTY

Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w	Rig.
R. Ramsey's No. 1 Hutton, SW NE SW Sec. 6-20-9w	Drlg. 2,025 ft.
Slick et al's No. 1 Arth, SE NE Sec. 27-18-10w	Drlg. 2,490 ft.
J. Liggett et al's No. 1 Thodel, C NW NW, Sec. 11-21-7w	S.D. 50 ft.

RUSSELL COUNTY

J. Brennan's No. 1 Waly, CNL E½ NW, Sec. 29-13-11w	Rig.

RUSH COUNTY

Skelton et al's No. 1 Brock-Hartman, SW SE NE, Sec. 4-18-16w	S.D. 50 ft.

SALINE COUNTY

Twin Mounds Oil Co.'s No. 1 Weis, C W½ NE NW, Sec. 26-13-4w	Drlg. 3,150 ft.

SEDGWICK COUNTY

Miller et al's No. 1 Jones, SW cor. Sec. 25-27-1	Dry and abnd. 1,560 ft.
Scroggins et al's No. 1 Bartlett, NW SE NW Sec. 35-27-1	Drlg. 180 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW, Sec. 27-7-26w	H.F.W. 4,535-45 ft.; S.D.

STEVENS COUNTY

Argus Prod.'s No. 3 Christopher, C NE, Sec. 10-33-39w	S.D. 5,521 ft.

SUMNER COUNTY

Treese Oil Co.'s No. 1 Tompkins, SW, Sec. 26-33-1	Location.
Treese Oil Co. and Shell's No. 1 Springate, NE SE SW, Sec. 6-34-2	S.D. 3,639 ft.

Showings Among the Wildcats

Several important wildcat tests scattered over the central western part of the state were showing oil and nearing the pay horizons. In this district there are a number of tests attracting attention.

The territory north of Burrton in Harvey County gives promise of becoming a major producing area. Recent developments in that area indicate that some of the largest wells in the state may be found in that district. Nobody as yet can express an opinion on just what to expect from the Hunton lime in this area as it is the first Hunton lime production ever found in the state.

Mid-Kansas Oil & Gas Co.'s No. 1 Duerksen, NE cor. SE Section 19-22-3w, is expected to be the next well completed in the new area. The company ran into the Hunton lime 13 feet higher than the discovery well. It planned to cement the casing before drilling into the pay, but the bit broke through into the Hunton lime as the well started flowing. The company finally lowered the casing and cemented it after considerable effort.

Stanolind Oil & Gas Co.'s No. 1 Froese, SW cor. NW Section 20-22-3w, was flowing at the rate of 70 bbls. an hour. The well was making sufficient gas to flow it. McBride, Inc.'s No. 1 Friesen, NW cor. SW Section 20-22-10w, was flowing at the rate of 177 bbls. an hour and was drilled deeper into the pay horizon than any of the other completed wells in the field to date. It is believed that this area has considerable future possibilities. There are no other tests near these wells nor dry holes to condemn any part of the immediate area.

Skelly Laying Pipe Line

Skelly Oil Co. is now laying a pipe line to these wells in Harvey County.

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Producer Near Cygnet, Wood County, Ohio Outstanding Feature in Central West

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 5.—The outstanding feature in the Central West Field was the bringing in of a 150-bbl. producer in the heart of the old Lima Field, near Cygnet, in Section 6, Bloom Township, Wood County, by Carl H. Schwyn in No. 2 tract of the George C. Zody farm. This well is in what was a field where many gushers were found during the early days of the old field when hundreds of drilling wells were being drilled over Wood County. One feature of this part of the field near Cygnet was the finding of oil in commercial quantities deep in the Trenton limestone. In some cases as many as four pays were developed as far as 400 feet in the lime, and the wells have been continuous producers for more than 40 years. No. 26 well is now being drilled by Schwyn on the Zody farm.

Another well of interest was drilled by John Doblinger, on the Daniel Knauss farm, Section 8, Monclova Township, Lucas County, west of Toledo, which produced an initial of 30 bbls. natural and might prove much more productive, if given a shot. E. J. Davis and others are starting development on the Charles B. Holloway farm, Section 7, Monclova Township, and there are indications other tests will be started soon.

A well was reported near Deerfield, in the western part of Monroe County, Michigan, showing for 250 bbls., but it is one that was drilled many years ago, and the hole was full of rubbish and was cleaned out and given a shot. It might make a small pumper when put on the pump. It is No. 1 on the Frank Roe farm, SE NW Section 19, Dundee Township, and about 1,000 feet west of the good well drilled on the Gaertner farm, a few years ago.

In the Tiffin Field, in Seneca County, northwestern Ohio, the Cessna-Feasel Oil Co. drilled in a light gas well on the J. R. Puffenberger farm in Liberty Township.

In the East Toledo Field, in Oregon Township, Lucas County, Joseph Casper abandoned his No. 12 on the A. Chesbrough farm, Section 4.

In Sandusky County, Madison Township, the Van Vleck & Stow Oil Co. abandoned Nos. 2, 3 and 4 Charles Herman farm, Section 24, also Nos. 1 and 2 Henry W. Hoessman farm, same section. In Woodville Township, the same company pulled out Nos. 1, 3 and 6 John Kaischke farm, Section 12, and Nos. 1 and 2 on Henry Ninke farm, Section 1. In Washington Township, same county, the same company abandoned Nos. 1, 2, 3 and 4 Charles D. Keenan farm, Section 19.

In Wood County, Montgomery Township, the Ohio Oil Co. abandoned Nos. 2 and 4 on the James A. Graham farm, Section 22, and the Van Vleck & Stow Oil Co. did the same with Nos. 1, 2, 3, 4 and 5 Amanda Dailey farm, Section 3. In Henry Township, the Ohio Oil Co. pulled out Nos. 4 and 14 Frank White farm, Section 21, and No. 7 on the J. Franks farm, Section 15.

CENTRAL OHIO

Only two completions were reported from the Central Ohio Field proper. The Ohio Fuel Gas Co. brought in a light gas well in No. 1-5,655 on the Paul A. Rohr farm, Section 20, Jackson Township, Stark County, and the Preston Oil Co.'s No. 1-1,513, J. H. Hange farm, Lot 3, Chatham Township, Medina County, was reported dry, finding no production at 430 feet. Same company is drilling No. 2-1,511 on the John R. Rine farm, Section 16, Perry Township, Coshocton County.

In Licking County, Hopewell Township, the Wehrle Gas Co. is drilling deeper its No. 1 Charles Kraeger farm, Lot 33, and has a rig on the Wehrle & Co. property, in Lot 3, same township.

In Muskingum County, Palmer & Geisinger are drilling on the John R. Williams farm, Section 11, Washington Township. Kime and others are drilling No. 2 Charles Oberlin farm, Section 6, Jackson Township, Stark County. Plain Natural Gas & Oil Co. has a rig on the Levitt Stoner farm, Section 20, Plain

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New Well in South Turner Valley Field Shows Large Yield of Exceedingly Wet Gas

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 2.—In the South Turner Valley Field, Hylo Oils' No. 1, LSD 12, Section 4-19-2w5, drilled into production 170 feet in the Madison lime at 5,670 feet. The well is reported to show a large production of exceedingly wet gas, and preliminary tests on the separators without pressure gave a yield around 200 bbls. a day. It is expected that application of pressure will increase this to approximately 300 bbls. The test previously had a light crude production, from the Home sands at about 4,965 feet, ranging from 30 to 95 bbls. a day. Production taken from this horizon as the well went down is reported to have paid for the drilling.

Hylo's No. 1 was started some years ago by Hylo Oils, Ltd., which quit work at about 1,900 feet. Late in 1930 the well was taken over by a Calgary syndicate comprising S. G. Carscallen, W. Fay Becker and Clarence and George Snyder. After getting a good commercial crude production in the Home sands, the test was deepened, entering the Madison lime at 5,501 feet. Drilling operations were in charge of Clarence and George Snyder. Hylo's No. 1 offsets Mercury Oils' No. 1, the largest individual producer in the field, being approximately 1,200 feet south of the Mercury well.

Far South Test

In the far south end of Turner Valley, Mar-Jon-Freehold's No. 1, LSD 9, Section 28-18-2w5, has been making rapid headway and is reported drilling at 4,065 feet. A. M. Mayland's No. 1, LSD 5, Section 34-18-2w5, is standing cemented at 300 feet.

McLeod Deep Test

In Central Turner Valley, McLeod Oil Co.'s No. 4, LSD 16, Section 1-20-3w5, is running three tours and drilling below 6,245 feet. Approximately 685 feet of hole have been made since the drill entered the Banff shales, below the Madison lime, though there is a possibility that the drill is out of the shale horizon and working in underlying limestone. The oil show, estimated at 5 bbls. a day, encountered near the top of the shales, seems to have been increased a little by deeper drilling. The hole is geologically the deepest ever drilled in the Turner Valley Field, though in point of actual depth it has not attained the record established some years ago by British Dominion's No. 1, which went to 6,600 feet without getting the top of the Madison.

McDougall-Segur Operations

Shareholders of the New McDougall-Segur Oil Co. and of the McDougall-Segur Exploration Co. held their annual meetings at Calgary last week, when the following directors were re-elected: F. M. Graham, R. J. Hutchings, J. McKinley Cameron, D. J. Young, Dr. L. S. Mackid, John I. McFarland, T. M. Carlyle, all of Calgary, and J. Duff Robertson of Victoria, British Columbia. The old officers, F. M. Graham, president; R. J. Hutchings, vice president; A. M. Pinkham, secretary-treasurer, and Pearle Miller, acting secretary treasurer, will continue for the time being. The shareholders approved the proposal to drill New McDougall-Segur's No. 5, NW Section 12-20-3w5, the location being between the other New McDougall-Segur wells and Widney Petroleums' No. 1. Work has already been started on No. 5, which will be a test of the crude oil horizon in the McDougall-Segur sand, owing to the fact that Alberta government regulations prevent the drilling of new tests to the Madison lime horizon. About 3,000 feet of drilling will get this sand. The company's earlier tests got the sand between 2,478 and 2,620 feet, with flush production of 50 gravity crude reported as high as 100 bbls. a day. New McDougall-Segur Oil Co.'s No. 1 has been abandoned, but three other wells are still listed as producers.

North Turner Valley

In North Turner Valley, Model Oils' No. 2, LSD 16, Section 22-20-3w5, has run into crooked hole and is reported fishing for lost tools preparatory to straightening. The test had been drilled to a reported depth of 3,910 feet, but will likely be redrilled from 3,840 feet. The test was taken over last December from Anaconda Oil Co. and is a half mile north of Model's No. 1 producer.

Test for Steveville

It is expected that the Steveville district of southern Alberta will get a definite test this summer. Steveville Oil Co. has been incorporated by W. Marler and associates of Vancouver, backed by some British and American capital, and it is stated that a contract has already been let to the Union Drilling Co. for No. 1 well. The area was favorably reported on by government geologists many years ago, and at the time of the first Calgary boom in 1914 several tests were projected, but no actual work was done. Drumheller and Bassano syndicates hold considerable acreage about Steveville, and there are a number of small leaseholders. It is understood the various leaseholders are putting in their acreage on a royalty basis to secure a test. Location will be close to Steveville, and the test will probably spud in this month.

Red Coulee Producer

On the Montana end of the international Red Coulee structure Askalta Oils' No. 5 Farbo, SE NE Section 2-37-4w, has been brought in at 2,517 feet with flush production estimated as high as 300 bbls. a day. A settled production of 150 bbls. is looked for. The gas flow accompanying the oil is estimated around 3,000,000 feet a day, being the highest yet struck in that area. The location is close to the Alberta boundary and a quarter mile south of the Vanalta wells.

Oil City Location

In the Waterton Lake area, southwestern Alberta, Patrick Spence Oil Syndicate of Calgary has located its No. 1 test in the old Oil City Field, close to the site of the old discovery well in Section 30-1-30w4. Thomas Visser, rig builder, of Okotoks, will set up the outfit, and work will start early in July. Hauling is difficult as the location is in the mountains.

Foothills Test Resumes

On the Fisher Creek structure west of Calgary, Cotton Belt Mines' No. 1, LSD 5, Section 21-21-4w5, is making hole below 2,900 feet.

Red Coulee Location

Following the strike in Askalta Oils' No. 5 in the Montana end of the Red Coulee Field, Askalta's No. 6 has started work. Location is between No. 5 producer and the Vanalta wells on the Alberta side, and just east of Mid-Continent's No. 1 producer.

Northern Alberta Test

In the Athabaska district, northern Alberta, Athadome Oils' No. 1. N half Section 20-72-24w4, is reported drilling close to the contract depth of 1,550 feet. Shallow gas was encountered at 70 feet and the Pelican sands were higher than anticipated, but at last reports the drilling had not got the Athabaska tar sand horizon where crude production was anticipated.

Manitoba Gas Test

In southwestern Manitoba, near Manitou, Commonwealth Petroleums' No. 2, LSD 2, Section 26-2-9wPM, is moving casing from the Fuego Oil Co. well in the Acadia Valley, southeastern Alberta.

Pipe will be run before the test resumes at 1,917 feet.

Fort Norman Work Starts

Word has been received by Imperial Oil, Ltd., that Ronald W. McKinnon and party who left Edmonton some time ago have arrived at Fort Norman. They have started operations on the small refining plant set some years ago by Imperial Oil, Ltd., to the Fort Norman Field, and will produce gasoline and fuel oil for use on the northern rivers and in the Great Bear Lake mining area. The company's two producing wells, 53 miles north of Fort Norman, have an estimated potential production around 100 to 140 bbls. a day.

New Brunswick Operations

The output of gas and oil in the New Brunkswick Field in 1931 was somewhat less than for 1930, but the reduction from the average of the last 10 years was only about 5 per cent. In 1931 crude oil production totaled 6,742 bbls. compared with 6,983 bbls. in 1930. The value of the natural gas output in 1931 was $129,341 compared with $133,505 in 1930.

Oil Production in Dawn

In the Dawn Field, Lambton County, Union Gas Co.'s No. 61, NW Lot 23, Concession 2, Dawn Township, has been cleaned out and put on the pump for a test of oil production, following a shot between 1,815 and 1,825 feet. The test shows the well to be a small pumper, making around 25 bbls. a day flush production. There is very little gas, somewhat less than 50,000 feet a day. It indicates a possibility of some oil development in the west end of the field, near the Dawn-Sombra Township line. A test drilled by the Union Gas Co. some years ago a short distance east of No. 61 got a show of oil with practically no gas in the Dawn sand. It pumped about 40 bbls. of crude and was abandoned. Union's No. 62 has been located about 2,200 feet northeast of No. 59 gasser, and in a line with No. 61.

Union's No. 61 is east of the Dawn Oil & Gas Co.'s acreage in Sombra Township. Dawn's No. 1 finished a dry hole some time ago, but it is reported that F. H. Stover & Son will move in an outfit for a second test some time next month. It is also reported that Leo Wilson and associates will drill a test in Sombra Township this summer.

In Euphemia Township, Vogel's No. 2, NW NE Lot 20, Concession 10, has finished dry at around 400 feet. No further tests for shallow oil in this area have been announced. Following the drilling of Lambton Oil & Gas Syndicate's No. 1 in SW Lot 28, Concession 9, Euphemia Township, with a flush production around 35 bbls. from 380 feet, the Lambton syndicate drilled three shallow tests and the Vogel Syndicate two tests, all finishing dry.

In Enniskillen Township, Fairbanks Oil & Gas Lease's No. 3, close to Oil Springs, is reported drilling close to the producing horizon.

Kent County Tests

In the old Tilbury Field, near Fletcher, Luke Smith's No. 1, Lot 2, Concession A, Raleigh Township, is reported finished at around 530 feet and looks like a fair pumper. The test drilled into a big pocket of shallow gas at 90 feet, which ignited, destroying the derrick; and some delay was caused while the derrick was rebuilt.

In the D'Clute Field, Raleigh Township, Union Gas Co.'s No. 21, Lot 22, Concession 10, is reported drilling below 400 feet.

In Dover Township, Kent County, Olga Oil & Gas Co.'s No. 4 on the Stephens farm, Dover West, is being abandoned and plugged. This was drilled some years ago and secured a gas production, reported as high as 750,000 feet a day, from the Trenton limestone. Actual deliveries settled to around 75,000 feet.

Oil at Caledonia

A shallow oil development that may prove important has been started at Caledonia, Ontario. White Eagle Oil & Gas Syndicate, recently organized by Sarnia and Petrolia men, has drilled two shallow tests. White Eagle's No. 1 is reported to have been a fair pumper, and No. 2 proved somewhat larger. White Eagle's No. 3 is now drilling. Those interested include W. J. Hussey, J. P. Josh, D. B. White, Eric Hussey, L. McPhee and C. R. Hoskins.

George Bryson of Petrolia, who recently returned from drilling for the Royal Dutch Shell interests in Borneo, is overhauling and refitting the wells on the oil farm in Enniskillen Township which he recently purchased from the Joseph E. Armstrong estate.

Other Ontario Tests

Farther east, in Middlesex County, Judd Gregory of Petrolia is reported drilling a test for a Toronto syndicate in Nissouri Township, near London. Oil shows have occasionally been met in various parts of Middlesex County, and there is a considerable shallow pool in Mosa Township north of Glencoe.

In Norfolk County, F. H. Stover & Son have started work on Acme Oil & Gas Co.'s No. 10 on the W. F. Kingston farm. This is a test for gas, production to be taken by the Dominion Natural Gas Co.

Guernsey County, Southeast Ohio, Test Big Producer for Week in Eastern Fields

By STAFF CORRESPONDENT

PITTSBURGH, Pa., July 2.—In a notice to all producers of Pennsylvania Grade oil connected to the lines of the Buckeye Pipe Line Co. in Ohio, the South West Pennsylvania pipe lines in southwest Pennsylvania, and the Eureka Pipe Line Co. in West Virginia, and with whom contracts exist for all oil as run, the South Penn Oil Co. advised that, for the month of July, it would take but 75 per cent of the customary amount, the average production based on November, 1931, runs.

For the past two months the allowable production has been 90 per cent and eastern producers had hoped that conditions might permit a return to full production in this period of heavy seasonal demand. However, earlier in the month, at a meeting of refiners, a strong sentiment appeared against glutting the refined market with a capacity output. This has been reflected in the increase in crude stocks in late weeks and appears in the notice of the South Penn Oil Co. quoted below in part:

"Our company has notice of further curtailment on the part of refiners of Pennsylvania Grade crude during the month of July, and in order to meet this situation, we are compelled to ask our patrons to further curtail their production of Pennsylvania Grade oil in order that we may be obligated to take but 75 per cent of the amount customarily received.

"We want to express our appreciation of the very complete co-operation we have received from all our patrons during the month of June, and to express the hope that the maintenance of a balance between production and consumption will bring about a more satisfactory condition.

"It is a little early to predict what the August condition will be, but from the present statistics of our industry, it would appear that there should be a slight improvement by that time."

Nine completions and one dry hole is the summation of the work completed in the three districts of the Eastern fields during the week. Five were oil producers, with an initial production of 93 bbls., and four were fair gas wells. In Southeast Ohio four producers were completed.

SOUTHEAST OHIO

The largest producer in the Eastern fields for the week was a test in Guernsey County. In the NW of Section 5, Monroe Township, E. C. Quillan and others completed a test on the A. K. Shearer farm in the Niagara line at a depth of 3,683 feet. It produced 57 bbls. the first day, natural, and in accord with present day conservation methods, has not been shot.

In Medina County there were three producers. On Lot 9, Tract 9, in Chatham Township, E. R. Edson & Son Co. extended its shallow sand operations with a test on the D. M. Geisinger farm. It was completed in the Berea grit at 372 feet and produced 10 bbls. the first day after shot. In the same township, but in Section 10, the Oko Oil & Gas Co. drilled No. 32 on the Sanford and Watson tract to 331 feet. It produced 5 bbls. the first 24 hours after shot. In Harrisville Township, and on Lot 17, F. Barnhard and others completed their No. 3 on the W. P. White farm. It produced 10 bbls. the first day after shot from a depth of 446 feet, and makes two out of three producers on this farm.

More Deep Sand Failures

To date the only deep sand producer in Washington County, Ohio, is the original Harris test on the Crago farm. Eleven wells have been drilled in the Third Warren, through it and deeper with the unvaried dry result. The deepest reached 3,754 feet through the Speechley sand and deeper with no showing. The latest well to reach the formation is the test of T. A. Witherspoon on the Homer Courtney farm in Grandview Township about a mile and a half north of the Crago test on the waters of Irish Run. It found the Warren dry and drilled deeper. There was a showing of gas at 3,100 feet but not in commercial quantities. Drilling has been resumed and the hole will be drilled about 200 feet deeper.

The Reno Oil Co.'s test on the James H. Goodman farm in the SE of Section 14, Independence Township reached a depth of 3,214 feet, the Warren being found at 2,900 feet, and the test was shut down, the casing being left in the hole and the drilling tools removed. This test proved nothing and was originally intended to have been drilled to 5,000 feet or better, but will remain shut down waiting on the test on the E. E. Knowlton farm. There, Eugene E. Grimm and others, Benedum and Trees having an interest in it, have reamed out their test to a depth of 2,725 feet within 700 feet of the original depth of the test. When reaming has been completed, heavier drilling tools will be rigged up for a fresh start, which is to extend down to the Niagara lime, estimated at 6,000 feet.

In the NE of Section 18, Newport Township, the Huntsman Gas Co. has completed spudding in on the John Butler farm and starts on tour today. Slow progress has been made but this well is intended for the Injun sand only.

WEST VIRGINIA

After several weeks without any new production being reported from West Virginia, one completion added 10 bbls. to the total but probably will not be completed as a producer as the oil is very black and in a formation known to be short lived. In Barboursville district, Cabell County, the Merrits Creek Gas Co. completed a test on the Ohio River Land Co. in the lime at 1,331 feet. It made a showing of about 10 bbls. a day and a heavy flow of gas estimated at over 1,250,000 feet a day. This is the second fair gas well completed by this company in this section.

On the waters of Mud River in Grant district, Cabell County, the United Fuel Gas Co. completed its No. 4,365 on the J. F. Grass farm in the Berea sand. It is showing for a fair gas well and is about a mile and a half northwest of the test of Meabon and Huffman on the Charles Gillenwater farm. On the same river, about 2 miles west of Hamlin Station, in Carroll district, Lincoln County, the same company completed its No. 4,370 on the Lewis Sweetland farm. It is a 250,000-foot gasser from the Berea sand.

In Logan County, the Cumberland Petroleum Co. completed No. 7 on the Merrill Coal Co. tract in Chapmansville district at a depth of 1,430 feet and in the Maxon sand. It will make a fair gas well.

Drilling in West Virginia

In Lincoln County there is but one well drilling after a period of fair activity. It is the Vernon Gas Co.'s No. 3 on the Roy and Hal Adkins farm in Union district, which has reached a depth of 1,400 feet. In Sheridan district, the Kanawha Gas & Utilities Co. abandoned its locations for a second test on the Nona Johnson farm, and a test on the Byron Johnson farm. It also abandoned its location for No. 3 on the W. W. Carroll farm in Carroll district. The Hamline Natural Gas Co. is still holding its location on the J. Miller farm in Jefferson district.

In Boone County, the Cambridge Gas Co. has reached a depth of 500 feet in No. 3 on the C. C. Lewis heirs farm in Scott district In Sherman district, the Pure Oil Co. is down 2,766 feet in No. 57 on the Federal Coal Co. tract, and on the Williams Coal Co. lease it has its No. 258 drilling at a depth of 975 feet, with a rig standing for its No. 256. No new locations have been made in this county.

In Gilmer County one well is drilling. James A. Tierney has a second well drilling on the F. G. Hardman farm in DeKalk district, No. 1 on this farm having come in some months ago with a heavy flow of gas. In Marion County, Monroe and Laughlin are down 1,240 feet in a second test on the D. V. Liming farm in Mannington district. In this district, J. J. Allen and others have a road completed to a location on the James A. Hough heirs farm.

In Jackson County, H. H. Sheppard and others have started building a rig on the T. C. Burdette farm in Washington district. In Roane County, Snyder Brothers and others are building a rig on the C. and C. Guthrie farm in Curtis district. In Smithfield district, which of late has been inactive, Bowers and Jackson have made a location on the Smith and Chewning lease. In Calhoun County a new rig is up, that of C. B. Lewis and others on the Louis Hamilton farm.

SOUTHWEST PENNSYLVANIA

The only dry hole in Southwest Pennsylvania was the test of Williard Iams & Co. on his own property in Amwell Township, Washington County. It was drilled through the Fifth sand and to a depth of 2,450 feet. Very little oil or gas was found, and the test was considered dry. In Hanover Township, C. C. Andrews completed his No. 6 on the J. P. Ramsey farm in the 100-foot sand at a depth of 1,250 feet, shallower than the total depth. It will probably make about a half barrel producer.

In South Franklin Township, Washington County, the Martin Oil & Gas Co. has spudded in and started drilling on the Hiram McCleen farm. In Greene County, J. L. Garard & Co. have started drilling No. 6 on the J. L. Garard No. 3 lease in Greene Township. In Dunkard Township, Fred Garrison is shut down at 500 feet on the C. D. South farm.

Excess Production at Long Beach Jeopardizing Latest Curtailment Program in California

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 2.—The most important thing confronting California operators at the present time is the necessity of strictly observing curtailment obligations, because the failure to do so will certainly result in the withdrawal of the new price schedule posted by the Standard Oil Co. on June 26. The Standard's position is definite, as operators will find out to their disadvantage if they persist in chiseling. Long Beach has already exceeded its maximum allowable for four days and in doing so has seriously jeopardized the curtailment program, upon which the new price schedules are based. It may be possible of course that operators will be able to eliminate the excess before expiration of the first 10-day period on July 6, but this will require concerted action as the excess already accumulated during the first five days must be offset by a similar underage during the last half of the 10-day period.

The Standard, in a recent statement, reiterated the stipulation that a strict observance is a prime requisite to the maintenance of present prices. The company has also clarified the 10-day clause in its original statement and indicated that if the daily average production of any field for a 10-day period should be in excess of the established allotment it would conclude that operators had violated the conditional stipulation that no overproduction would be tolerated as announced when prices were increased. The excess production at Long Beach, which has been averaging a little less than 600 bbls. per day, has caused considerable anxiety because if this condition continues it means that field production on the tenth day must be cut back approximately 6,000 bbls. to offset the accumulated overage. Because it would be almost impossible to effect a reduction of this amount, the Long Beach field committee under the direction of Chairman V. R. G. Wilbur is making a determined effort to offset the overage as much as possible before the dead line.

Gasoline Price at Stake

The seriousness of the situation confronting California operators lies in the fact that if the Standard Oil Co. reduces crude oil prices again it must likewise effect a reduction in gasoline prices within a reasonable period. It is a foregone conclusion that neither this company nor any other major marketer will raise gasoline prices one day and cut them the next because of the obvious unfavorable reaction which such a vacillating policy would have on the ultimate consumer. If refined oil prices come down, due to ineffective curtailment, they will in all probability stay down for a while. This revives the question as to what will happen if operators fail to keep production down to the established allowable. Will the old prices be restored or will major companies give up attempts to effect stabilization and produce their own oil almost exclusively? There does not appear to be any middle ground because curtailment cannot be maintained unless prices are kept at their present level and existing prices cannot be maintained unless complete effective curtailment is achieved. The situation is full of dynamite and the outcome rests squarely on the shoulders of producers because they can either make or break the existing price structure of crude and refined oils. Major companies are naturally anxious to maintain the existing price structure for crude and refined oils but will nevertheless be obliged to withdraw the new price structure if any field exceeds its allowable because the effectiveness of the curtailment program depends upon strict observance of proration.

Heavy Crude Price

The failure of major companies to increase the posted price for heavy unrefinable crude below 20° A.P.I. caused San Joaquin Valley operators to enter a violent protest against this apparent discrimination. In telegrams address to K. R. Kingsbury, president of the Standard Oil Co., operators in the San Joaquin Valley stressed the fact that they had at all times loyally supported the curtailment program which has met with their entire approval from the beginning and that they feel they should be rewarded with just compensation. At an indignation meeting held in the valley late this week, operators reaffirmed their demands for an increase, but at the same time assured the executive committee on equitable curtailment that they would maintain effective curtailment. Several of the larger independents operating in the San Joaquin Valley expressed the opinion that while they would like to receive an increase they realized the excess production of heavy unrefinable crude would hardly permit an increase under present conditions. They were of the opinion, however, that prices for heavy crude might possibly be adjusted a little later this year provided consumption increased at a normal rate and that effective curtailment was maintained in Los Angeles Basin fields. West side operators, in a telegram to the central proration committee, informed Chairman Grimm that "sentiment here is tending strongly away from curtailment on account of no raise for heavy crude. Considering reasons given for the raise this committee feels it should cover all gravities. It is not fair to give a raise to operators who heretofore have been out of line and nothing to those who have been loyal to curtailment for two years. Present situation is critical." East side operators of the San Joaquin Valley informed the committee "operators greatly disappointed over new price schedule. Curtailment program has met with hearty approval and should be rewarded with just compensation. Will continue to co-operative hoping fairness and justness will be shown. Equal consideration for the disposal of crude should be accorded all operators in the Round Mountain Field."

New Depth Record

The Western Gulf Oil Co. has just broken the record for depth, at least so far as California is concerned, when it reported its wildcat in the Santa Maria district as rotating at the close of the week at 10,054 feet. The deepest well drilled previous to this was the Chanslor-Canfield Midway Oil Co.'s No. 2-A Hobson, a deep test in the San Miguelito Field, which was bottomed at 10,030 feet, but failed to develop commercial production and was plugged back to 7,525 feet. The Western Gulf's deep test in the Santa Maria area of Santa Barbara County was still in brown shale at last reports, and, while drilling will probably be continued, the outlook for production is decidedly unfavorable. This well has drilled through the greatest thickness of brown shale encountered in any California well up to the present time. Because of its persistent effort, the Western Gulf has gained the sympathy of many California operators who are hoping that the perseverance of the company will ultimately be rewarded by production.

The Western Gulf, in its relatively short existence in California, has established an enviable record of achievement. This company, it will be recalled, opened the Fruitvale Field of Kern County where it has substantial holdings. The company has adhered strictly to the curtailment program with the result that its curtailed production in the Fruitvale Field approximates 8,000 bbls. per day. The discovery of the Fruitvale Field is unique in the annals of the California oil industry, due to the fact it is located out on the floor of the San Joaquin Valley which, for a number of years, was passed up by major California companies due to the absence of any prominent topographic high. Coming into southern California, the Western Gulf started a wildcat in the Playa Del Rey district of Los Angeles Basin despite the antipathy of California companies. The Gulf interests surprised the local boys one day by completing a commercial producer in what is now the Playa Del Rey Field of Los Angeles Basin. The Western Gulf has adhered strictly to the curtailment program in this field also and, by refraining from all unnecessary drilling, has held back approximately 200 acres of potential oil land for future development. The Western Gulf and the Union Oil Co. are the only operators holding acreage in the Playa Del Rey Field. The remainder of this field consists of town lots, most of which have already been developed and some are at present experiencing edgewater encroachment. The Western Gulf and the Union and possibly a few other conservative operators are the only ones in the Playa Del Rey Field which will show a profit from development.

Kettleman Hills

A check of development work under way in the North Dome of Kettleman Hills indicates the probable completion of perhaps six wells within the next 30 days. These potential completions include two wells of the Kettleman North Dome Association expected to be finished within a few weeks. The association's two wells listed for early completion are No. 21-1 P, an offset to No. 1 Dixon of the Shell Oil Co., and No. 61-2 P, located south of No. 3 Felix of the Petroleum Securities. Kenda's No. 76-34 Q in Section 34-22-18 is rotating at 8,200 feet. Normal progress was made in most of the wells drilling in the North Dome during the past week and in addition the Powell-Stockton Investment Co. succeeded in recovering the fish which has been holding up drilling in No. 1 Courtner at 7,555 feet. There have been no new wells started in the North Dome for several months with the result that most of the projects under way are nearing the completion stage almost simultaneously. The completion of these wells will not upset the production equilibrium, however, as operators in the North Dome are definitely committed to the existing curtailment program which limits the field production to a maximum of 60,000 bbls. per day. It is interesting to note that in spite of the fact that Kettleman Hills has built up a potential daily production of approximately 250,000 bbls. per day, actual production has been kept down to or below the established allotment.

The Standard is cleaning out No. 6-29 V in the Kettleman Middle Dome Field and will conduct a minute survey to determine where the water has been entering this hole. A preliminary survey has indicated a probable hole in the 8⅝-inch water string and if this is subsequently confirmed, a squeeze job will probably be undertaken. The Union has started rig construction for No. 2 Amerada King, located in the western end of the structure, and the bit in this well should begin making hole within 10 days. The Standard has started an offset to No. 2 King of the Union and is also making preparations to start a new well in Section 27-22-18.

Fruitvale

The Western Gulf added a new well to its list of producers in the Fruitvale Field of Kern County during the week when No. 1 Harty was brought in doing 464 bbls. of clean 23.5 gravity oil per day from 4,090 feet, the hole having been plugged back from 4,114 feet and finished with a 4½-inch liner carrying 140 feet of

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Diesel and gas oil	.....	.....	30,180	4,311	147,070	892,230
Gasoline	613,696	87,671	348,253	49,750	4,072,844	7,164,725
Kerosene	.....	.....	50,477	7,211	154,372	89,109
Foreign exports—						
Crude oil	89,948	12,850	73,827	10,547	4,206,374	3,444,941
Fuel oil	273,255	39,036	72,490	10,356	4,427,048	7,118,755
Diesel and gas oil	94,241	13,463	27,295	3,914	1,253,950	1,824,250
Gasoline	101,703	14,529	100,726	14,389	4,429,708	4,446,655
Kerosene	107,750	15,393	89,973	12,725	1,232,213	784,456
Lubricants	.....	.....	.....	.....	.....	18,978
Naphtha distillates	.....	.....	.....	.....	76,425	.....
Coastwise-domestic—						
Crude oil	176,831	25,261	335,626	47,947	6,394,610	10,365,944
Fuel oil	187,488	26,784	113,455	16,208	6,021,616	6,435,849
Diesel and gas oil	1,172	168	13,960	1,994	676,924	771,816
Gasoline	234,413	33,488	250,257	35,751	7,372,423	6,443,059
Kerosene	4,696	671	.....	.....	89,171	169,449
Naphtha distillates	.....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	.....	.....	.....	.....	151,220	.....
Gasoline	.....	.....	.....	.....	368,230	405,469
Lubricants	.....	.....	.....	.....	15,824	21,990
Foreign exports—						
Crude oil	.....	.....	.....	.....	707,651	197,736
Fuel oil	.....	.....	.....	.....	521,659	707,881
Diesel and gas oil	.....	.....	.....	.....	352,107	294,708
Gasoline	.....	.....	30,102	4,300	1,746,261	1,939,628
Kerosene	.....	.....	.....	.....	491,863	429,002
Lubricants	.....	.....	.....	.....	24,934	.....
Naphtha distillates	.....	.....	.....	.....	.....	20,100
Coastwise-domestic—						
Fuel oil	76,543	10,935	175,763	25,109	1,441,315	2,042,437
Diesel and gas oil	16,511	2,359	.....	.....	238,094	195,112
Gasoline	131,688	18,813	37,748	5,393	1,631,055	1,512,623
Kerosene	.....	.....	2,160	309	65,756	136,990
Naphtha distillates	.....	.....	.....	.....	.....	49,780

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perforated. There are a number of additional wells being rigged up for early work in the Fruitvale Field and several should be spudded in within a few days. Included in this list is No. 1 Hensley of the General Petroleum, No. 1 Bloemer of the Petrol Producing Co., H. L. Whiston's No. 1 Fairhaven and the Sea Hawk Petroleum Co.'s well No. 2-B. The Treasure Oil Co. has finally listed its No. 1 Knoles as a successful completion at 3,640 feet, from which depth it has shown a settled production of 218 bbls. per day. The Western Gulf is expected to finish two new wells in the Fruitvale Field some time during the course of the next week or 10 days. These two potential producers are No. 1 Bittle and No. 12-B on the Kern County Land Co. property.

Midway-Sunset

The Standard Oil Co. has resumed drilling operations in No. 1 Mascot, a deep test in the Midway-Sunset Field of Kern County, following a suspension of 18 months' duration. It will probably be several days before the company begins making footage as some time will be required to recondition the hole. At the time drilling operations were suspended the Standard announced it had not found anything indicating the possibility of production. It might be well to watch this well closely during the next few weeks as it is not at all improbable that with the addition of a little more hole the outlook may be changed. During the past week or so the company has been repairing the roads to facilitate transportation of drilling equipment. A rumor has been prevalent that the Standard has been acquiring additional leases adjacent to the Mascot property, but this report is entirely erroneous as no additional leases have been reported at Bakersfield, the county seat of Kern County. The Republic Petroleum has just completed its No. 35-A in Section 7-32-23 at 3,050 feet but the initial daily output, 140 bbls., is somewhat below expectations. The well seems to be cleaning up and may show a better production. The company was unsuccessful in securing a natural flow and the well was put on the beam.

Lost Hills-Belridge

The Belridge Oil Co. finally succeeded in killing No. 64-27, its deep zone discovery in the North Belridge Field of Kern County, and this project will remain on the suspended list in conformity with the curtailment program. Just previous to being killed, it was producing 2,040 bbls. of exceptionally clean 50.3 gravity oil and 65,000,000 feet of gas per day from 8,062 feet. The gas contained a little better than 2 gallons of natural gasoline for each 1,000 feet of gas. The killing of this well precludes any thought of deep zone exploitation by other operators holding potentially productive acreage in this field. Efforts are under way to revive interest in the Lost Hills Field but it is believed deep zone exploration will be prevented at least until conditions improve.

Buttonwillow

The Milham Exploration Co. successfully completed No. 32-7 on the S. P. Land Co. property in Section 7-28-23 in the Buttonwillow gas field of Kern County at 2,484 feet. This new well, which tested wet on a preliminary production test 10 days ago, was brought in flowing 8,700,000 feet of natural gas per day after being deepened to 2,484 feet. This new well came in prematurely as it began flowing on a water shutoff test earlier in the week. It was killed and later recompleted after a 4¾-inch liner had been landed in the hole. The Milham, discoverer of the Buttonwillow gas field, has just spudded in No. 43-7, located in Section 7-28-23. Drilling operations in the Tulare Lake region are practically at a standstill and there is nothing to indicate the starting of any new work in this area.

Ventura Avenue

The Associated Oil Co. has just passed the 9,695-foot level in No. 83 Lloyd, a deep test which the company is drilling in the prolific Ventura Avenue Field. This new well is scheduled for completion in the deep 57 zone. The Associated is endeavoring to secure a maximum penetration in the 57 zone but has been encountering considerable difficulty due to the ever-increasing gas pressure. The well has almost got away on several occasions but has been kept under control by the addition of new heavy mud at periodic intervals. The extreme gas pressure encountered is clearly indicated in the rotary drilling fluid which, as it comes back out of the hole, is badly gas cut. Barring the development of bottom water, this well should register substantial production when finally completed. No operator in the Ventura Avenue Field has yet drilled entirely through the productive formation on top of the structure. Recent reports indicate the bit was still in the Pliocene in No. 83 Lloyd at 9,700 feet.

Elwood

The Barnsdall and Rio Grande completed No. 8 on tideland permit No. 88 in the Elwood Field of Santa Barbara County early in the week and it was brought in doing 910 bbls. of clean 34.3 gravity oil per day on a compressor from 3,502 feet. This well was finished in the Vaqueros in conformity with the decision of operators to refrain from exploitation of the Sespe until conditions improve. The Pacific Western Oil Co. has just concluded drilling operations on No. 9 on tideland drilling permit No. 92 at 3,529 feet which should be given a production test within 24 hours. The Union has given No. 51 Newlove a preliminary production test but this new well, located in the Santa Maria district of Santa Barbara County, was good for approximately only 25 bbls. per day from 2,777 feet.

Playa Del Rey

The Balboa Oil Co. recompleted No. 1 in the Playa Del Rey Field of Los Angeles Basin after redrilling and deepening it to 5,664 feet. This well, deepened

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	9- 2-15	7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	26- 2-15	1,998	sd. sh. drilling
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20- 3-14	6,378	suspended
Barcus, W. I., No. 1 Watson, Los Angeles Co.	28- 4-13	rig	suspended
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	4,160	redrilling
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	suspended
Kyle, W. A., No. 1 Inglewood, Los Angeles Co.	7- 2-14	4,318	redrilling
Pacific Western, No. 16 Inglewood, Los Angeles Co.	8- 2-14	1,788	sd. sh. drilling
Rucker & Croul, No. 2 Puente, Los Angeles Co.	27- 2-10	2,200	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	2,860	cleaning out
Jones, W. I., No. 1 Bell, Los Angeles Co.	31- 2-12	1,593	suspended
Weist Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	4,902	suspended
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	suspended
McNeil, A. W., No. 1 Montebello, Los Angeles Co.	7- 2-11	rig	suspended
Wardell & Menichini, No. 1 Montebello, Los Angeles Co.	7- 2-11	304	suspended
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Caballero Estates, No. 1 Calabasas, Los Angeles Co.	23- 1-16	1,604	suspended
Marble, Willard, No. 1 Chatsworth, Los Angeles Co.	6- 2-16	1,395	suspended
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	1,960	sd. sh. drilling
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	7,259	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	suspended
Buena Park Oil Co., No. 1 Buena Park, Orange Co.	34- 3-11	....	material
Orangethorpe Pet., No. 1 Brea, Orange Co.	32- 3-10	3,204	hd. sd. drilling
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	25- 7-10	3,590	suspended
Duncan, N. I., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	suspended
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	670	sd. sh. drilling
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16	764	sd. sh. drilling
Borderland Oil Co., No. 2 Encinitas, San Diego Co.	29-16- 4	2,677	suspended
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	suspended
Oklahoma Oil Corp., No. 1 Palma, San Diego Co.	25-11- 8	1,888	suspended
Shannon, G. H., No. 1 Kearney, San Diego Co.	14-15- 3	446	suspended

through the liner, was returned to production flowing by heads at the rate of 90 bbls. per day. It was originally completed in the upper zone last year flowing 130 bbls. of 22.1 gravity oil per day from 4,186 feet. Two other wells are being rigged up in the Playa Del Rey Field preparatory to being deepened to the lower horizon, but with this exception the field is relatively quiet. The Standard has just spudded in two new wells on the Murphy-Coyote property in the West Coyote Field of Los Angeles Basin. In the Long Beach Field, the Dabney-Johnston Oil Corp. has completed its No. 85 Signal pumping 130 bbls. per day from 3,040 feet. There is practirally no new work under way in the Long Bearh Field although a number of operators are deepening upper zone produrers or reconditioning wells in the hope of stimulating production.

Dominguez Field

Drilling operations have just about been concluded in the Dominguez Field of Los Angeles Basin, although there are still a few wells being prepared for early completion. Most of the projects under way are wells started previous to the recent agreement reached to sit tight until conditions improve. These projects include No. 43 Reyes of the Shell Oil Co. and Nos. 16 and 18 on the Hellman of the Union Oil Co. The Republic Petroleum is working on one well in this field, but the outcome of its efforts to develop commercial production in No. 1 Childs is generally considered to be somewhat dubious. In the Potrero Field of Los Angeles Basin, the Wilshire Oil Co. is running four strings of tools and has about concluded to await the outcome of work on this quartet before starting additional work. The Shell Oil Co. has just plugged back No. 9 Rindge in the Inglewood Field to 2,760 feet and has returned it to production pumping 50 bbls. per day. This plugging job was undertaken to remove any doubt as to from which zone this well has been producing. There has been some question in the minds of Inglewood operators regarding the zones from which this well has been producing and to remove any possibility of deep zone development the Shell arbitrarily plugged back No. 9 Rindge. As a result the Pacific Western Oil Co. will probably complete No. 16 Rubel in the first zone instead of carrying it to the second horizon. None of the wells being drilled around the edge of the Inglewood structure showed any improvement during the week. The failure to pick up a sufficient amount of oil sand to justify a production test by any of these outposts has lessened the tension in this field and most operators are now content to permit matters to remain in status quo.

WICHITA FALLS CHAPTER

WICHITA FALLS, Tex., July 2.—At the monthly meeting of the Wichita Falls chapter of the American Petroleum Institute the following officers were elected for the year: W. B. Nicholson, Humble Oil & Refining Co., chairman; R. E. Bridges, Humble company, first vice chairman; M. H. Shanahan, Continental Oil Co., second vice chairman; James F. Gibbs, Panhandle Refining Co., secretary.

Retiring officers were C. B. Clement, The Texas Company; R. P. Brouthertin, The Texas Company; Joe H. Cable, consulting engineer.

IMPERIAL REFINERY PLANS

CHATHAM, Ontario, July 2.—On the occasion of his recent visit to Vancouver, B. C., announcement was made by C. O. Stillman, president of Imperial Oil, Ltd., that new equipment and processes would be introduced at the company's refinery at Ioco, B. C., in the near future.

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	unsurveyed	1,041	hd. sd. drilling
Barnsdall, No. 1 Los Alamos, Santa Barbara Co.	31- 8-33	5,000	hr. sh. drilling
Western Gulf, No. 1 Santa Maria, Santa Barbara Co.	5- 9-33	10,054	hd. sd. drilling
Wilson, N. S., No. 1 Los Alamos, Santa Barbara Co.	2- 7-35	4,979	suspended
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-29	2,110	cleaning out
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	25- 4-29	5,510	plugging
Pacific Western, No. 1 Gibraltar, Santa Barbara Co.	14- 5-27	2,345	suspended
The Texas Company, No. 1 Carpinteria, Santa Barbara Co.	33- 4-25	3,635	sd. sh. drilling
Associated, No. 1 Rincon Creek, Ventura Co.	19- 4-24	2,080	suspended
Woodrow Pet., No. 1 Miguelito, Ventura Co.	4- 3-24	2,853	fishing D. C.
Miller, J. W., No. 1 Miguelito, Ventura Co.	23- 3-24	....	grading
Bell, H. H., No. 1 South Mountain, Ventura Co.	22- 3-21	2,484	suspended
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	....	material
Superior Oil Co., No. 1 Timber Canyon, Ventura Co.	13- 4-21	rig	rigging up
Magu Synd., No. 1 Oxnard, Ventura Co.	17- 1-25	5,812	suspended
American Oil Co., No. 1 Conejo, Ventura Co.	33- 2-20	1,708	hd. sd. drilling
Wilshire Oil Co., No. 1-A Buttonwillow, Kern Co.	7-29-24	7,000	cleaning out
Milham Expl. Co., No. 15 Buttonwillow, Kern Co.	7-28-23	2,484	8,500,000 ft. gas
Milham Expl. Co., No. 16 Buttonwillow, Kern Co.	7-28-23	rig	rigging up
Milham Expl. Co., No. 17 Buttonwillow, Kern Co.	17-28-23	mtl.	building rig
Purman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	4,260	hr. sh. drilling
Welport Oil Co., No. 8 McKittrick, Kern Co.	26-29-21	1,298	recemented
Welport Oil Co., No. 2 McKittrick, Kern Co.	19-29-21	350	cleaning out
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Rio Grande, No. 1 Shale Hills, Kern Co.	7-27-19	2,407	sd. sh. drilling
Rio Cal Pet., No. 1 Shale Hills, Kern Co.	2-27-18	2,355	suspended
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,225	suspended
Hannah, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,360	hd. sd. drilling
Pyramid Oil Co., No. 1 Devils Den, Kern Co.	24-25-18	1,010	sd. sh. drilling
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	2,383	fishing
Regina Oil Corp., No. 1 Mojave, Kern Co.	26-10-14	2,828	hd. sd. drilling
Meridian Oil Co., No. 1 Mojave, Kern Co.	11- 9-15	4,000	suspended
Harding, J. B., No. 1 Mojave, Kern Co.	5-10-16	1,030	redrilling
Barnsdall Oil Co., No. 1 Tejon, Kern Co.	15-11-20	7,126	suspended
Ritchie, J. J., No. 1 Tejon, Kern Co.	33-11-19	6,025	suspended
Deacano Oil Co., No. 1 Tejon, Kern Co.	31-11-19	2,745	suspended
Associated, No. 1 Jacalitos, Fresno Co.	22-21-15	6,197	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,970	suspended
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-32-22	2,693	redrilling
Emerich Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	22-32-22	1,597	sd. sh. drilling
Trav-El Oil Co., No. 1 Carrizo Plains, San Luis Obispo Co.	7-32-22	2,450	suspended
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-12	3,352	suspended
Martin, J. D., No. 3 Edna, San Luis Obispo Co.	5-31-13	311	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-12	1,650	suspended
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,340	cleaning out
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Woodward, Glen, No. 1 Dudley Ridge, Kings Co.	32-22-20	569	cemented
Scott Bros. Drlg. Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,843	suspended
Lacal Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	32-22-20	541	cemented
Kettleman Natural Gas Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,100	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20	516	suspended
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	1,073	suspended
Tulare Basin Gas Co., No. 2 Dudley Ridge, Kings Co.	2-23-19	rig	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,694	fishing
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16	1,148	cleaning out
Mid-California Oil Co., No. 1 Avenal, Kings Co.	11-23-16	....	grade
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	5,060	suspended
Guess, E. B., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,840	testing
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Gravity Expl. Co., No. 1 Alpaugh, Tulare Co.	11-24-23	2,207	fishing D.P.
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,920	suspended
Twin State Oil Co., No. 1 Point Arena, Mendocino Co.	14-12-17	7,694	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	3,030	sd. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	3- 2-10	4,750	suspended
Hilderbrandt, R., No. 1 Crows Landing, Stanislaus Co.	36- 6- 7	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-12	2,594	sd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-13- 3	2,990	sd. sh. drilling
Easton & Monell, No. 1 Colma, San Mateo Co.	25- 3- 6	3,130	suspended

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North Louisiana Wildcat Stages Comeback With Good Flow of High Pressure Natural Gas

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 5.—The Standard Oil Co. and Pelican Natural Gas Co.'s No. 1 Sutherlin, Section 19-12-14, a wildcat in DeSoto Parish, North Louisiana, made a comeback during the past week after testing a small amount of gas the week before from 2,784 feet. The well was deepened to 3,003 feet and developed a flow of 11,700,000 feet of gas with 1,400 pounds rock pressure and will be completed at this depth. The wildcat is located on a 6,000-acre block assembled several months ago by these companies and is in potential producing territory as several other tests from 4 to 7 miles distant have had good shows of oil and gas. It is probable that one or more other tests will be drilled on the block in the near future in search of an oil-bearing sand underlying the gas. This was the only wildcat in this division to develop anything of interest during the past seven-day period.

The Zwolle Field furnished five of the nine completions and ran about true to past performances for that chalk rock area with two producers and three dry holes. The Coates Petroleum Co.'s No. 2 S. S. Martinez, Section 3-7-13, was the best well of the week, flowing 3,000 bbls. daily from 2,265 feet. The gusher is within the proven lines of the western extension of the field. On the eastern flank, C. T. Ruffian completed his No. 1 Lilley, Section 8-7-11, as a 75-bbl. pumper from 2,366 feet. One of the dry holes was a semiwildcat several miles west of production in Zwolle and 2 miles north of the Blue Lake area. Broderick & Calvert's No. 1 Costello, Section 2-7-14, as predicted last week, was dry and abandoned at 2,415 feet. The other two dry holes were drilled by W. M. Coates, his No. 1 LaRoux, Section 36-8-13, dry at 2,500 feet, and No. 1 Nulton, Section 1-7-13, abandoned as dry at 2,515 feet. Union Parish, in the Monroe Field, completed another small gasser, the Interstate Natural Gas Co.'s No. 3 Steele, Section 26-20-3e, with an initial flow of 4,500,000 feet of dry gas from 2,184 feet. Two dry holes were reported from Mississippi, one a rank wildcat and the other in semi-proven territory of the Jackson Field. In Jasper County the Bay Springs Petroleum Co.'s No. 1 Keys, Section 21-2-10, was abandoned as dry at 3,703 feet. This well has been shut down at 3,400 feet, the original contract depth, for several months when drilling was resumed a few weeks ago. The Rankin County area of the Jackson Field registered a failure when Orr and others were unable to get casing down in their No. 1 Hanna, Section 14-5n-1e. The total depth of the hole was 2,480 feet.

Mississippi Wildcats

Four wildcats in as many counties in Mississippi are making good progress and are being watched closely by operators interested in the development in that state. Stauffer & Kouri's No. 1 Bond, Section 18-2n-14w, Lamar County, is drilling in soft lime at 1,800 feet. On the central-eastern border, near the Alabama line in Lowndes County, the Lowndes County Oil & Development Co.'s No. 1 Carr estate, Section 34-17n-16e, has drilled through the red beds and is now in rock at 1,875 feet. This test has checked high on formations, encountering the chalk a few feet under the surface with the base at 620 feet. Monroe County, which furnished the first gas production in Mississippi, has one active test drilling. P. J. McAlpine's No. 1 Rye, Section 22-15s-17w, has set 10-inch casing at 574 feet on top of the Paleozoics. A Newton County test which has been shut down for several months, Bob Dalton's No. 1 Majure, Section 25-6n-11e, has resumed operations and is drilling at 1,520 feet.

A check on the field operations in North Louisiana during the month of June shows a decided increase over previous months during 1932. There were 32 completions with a new open flow production of 9,005 bbls. daily. Only five gas wells were completed from three fields and 16 of the operations were dry holes. The Zwolle area continues to be the most active on account of recent good wells extending the field both east and west. There are now 53 locations and rigs in this field and 48 drilling wells for a total of 101 operations. On account of the irregularity of the chalk rock production in Zwolle, this area reports a large number of the dry holes each week, but this is offset by the shallow depths at which the pay is encountered, and a ready market for the full production at Mid-Continent prices. Pipe line connections are usually obtained by all new wells in Zwolle within 24 hours after completion. Although a great part of the wildcatting is being done in Sabine Parish, there is a tendency on the part of operators to renew prospecting to the north and east of this area where there is a better chance of picking up a Trinity oil-bearing sand. This is particularly true of Webster and Claiborne Parishes in the vicinity of the Cotton Valley, Homer and Suger Creek Fields. The latter area produces a high gasoline content gas from Oolitic lime of the upper Trinity around 4,300 feet. Several large blocks are now in the course of assembling in Webster and Claiborne Parishes and it is the prediction that an oil field producing from the Trinity will be uncovered before many months. The deep tests now in progress in the Zwolle area have not shown that there is a sand likely to carry oil under the Oolitic lime of the Glen Rose, while the Sugar Creek area in Claiborne has been proven to carry such a potential sand. It is a generally conceded fact that the future paying oil fields in North Louisiana will be uncovered by deeper drilling and the several large blocks now being assembled will carry contracts for drilling to these lower horizons.

Drilling in Alabama

Some of the wildcats in Alabama have spudded in for deep tests. The Ohio Oil Co.'s No. 1 Bethel, Section 34-3s-2w, has set 20-inch surface casing at 67 feet and will set a large diameter subsurface casing at a lower depth. This test is contracted to drill to 7,000 feet. In Clarke County the Tidal Oil Co. and others are exceeding the original contract depth in their No. 1 Hobson, Section 33-6n-2e. Originally intended for a 3,500-foot test, the well is now drilling at 4,400 feet. Another wildcat in Mobile County, J. C. Prine's No. 1 M.&O. Railroad, Section 33-2n-4w, is drilling at 800 feet. A cable tool well in Lamar County, the DeSoto Oil & Development Co.'s No. 1 Gardner, Section 22-15s-16w, is drilling in lime at 2,510 feet.

A number of outside wells in the Zwolle area seem destined to be disappointments in extending production in their immediate localities. To the southwest, toward Blue Lake, J. H. Askew's No. 1 Sabine Lumber Co., Section 9-7-13, tested dry at 2,430 feet and is shut down waiting on orders. In the Blue Lake area, R. L. Gay, trustee's No. 11 Bowman-Hicks, Section 14-7-14, found the base of the chalk at 2,579 feet without encountering a break carrying production. Salt water sand was cored to 2,596 feet and the well has been cemented back to 2,316 feet for a test. On the eastern flank of the field, J. I. Hall's No. 1 Williams, Section 3-7-10, stands temporarily abandoned at 2,831 feet. A. D. King, trustee's No. 1 Gasway Germain, Section 7-7-10, was dry at 2,617 feet, and the same operator's No. 1 J. J. Andries, Section 15-7-11, tested dry at 2,563 feet. Arrangements are being made to deepen both of these tests after repairing rigs. The State Production Co.'s No. 1 Davis, Section 17-7-10, encountered the base of the chalk at 2,990 feet and is drilling in black lime at 3,018 feet. None of these wells had any appreciable show of oil in the chalk.

Daily Average Runs

The fields of North Louisiana and Arkansas showed a net increase of 425 bbls. in the daily average runs during the past week, the former gaining 355 bbls. and the latter 70 bbls. The daily average runs from the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo light	5,205
Caddo heavy	1,910
Cotton Valley	890
DeSoto and Red River	2,010
Elm Grove	225
Haynesville	4,320
Holly	275
Homer	2,875
Pleasant Hill	280
Sarepta-Carterville	935
Urania	3,590
Zwolle	7,675
Total	30,190
Total previous week	29,835
Increase	355

ARKANSAS

Champagnolle	1,875
El Dorado	3,025
Lisbon	510
Nevada	1,085
Smackover light	2,875
Smackover heavy	22,960
Stephens	715
Urbana	50
Total	34,095
Total previous week	34,025
Increase	70
Total both states	64,285
Total previous week	63,860
Increase	425

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

BEAUREGARD PARISH

Company, well, farm name, section and block— Remarks:

DeRidder Development Co.'s No. 1 McMahan, 158 ft. S, 160 ft. W NE cor. NW, Sec. 33-2s-9w ..... Set 10-in. 102 ft.; drlg. 910 ft.

BIENVILE PARISH

Blacklake Dev. Co.'s No. 1 Holstow, 600 ft. W, 100 ft. S, NE cor. SE SE, Sec. 17-18-6 ..... Drlg. 1,362 ft. (corrected).

CALDWELL PARISH

Carter Bell's No. 1 Taylor, 150 ft. S, 150 ft. E, NW cor. NE SE, Sec. 17-14-4 ..... S.D. 3,620 ft.

Hudson et al's No. 1 Burton, Sec. 35-12-2e ..... S.D. 2,950 ft.

CATAHOULA PARISH

National Drlg. Co.'s No. 1 Marsh McMillen, 70 ft. N, 100 ft. W, C, Sec. 26-9-6 ..... T.A. 3,097 ft.

DE SOTO PARISH

J. M. Bridges et al's No. 1 Joiner, 660 ft. S and E, NW cor., Sec. 33-11-12 ..... Rigging up.

Coker et al's No. 1 Boone, 200 ft. N and W, SE cor. SW NW, Sec. 12-10-11 ..... Rigging up.

Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor., Sec. 31-14-15 ..... Reaming to bottom 2,295 ft.

S. A. Guy's No. 1 Dowling, 465 ft. E, 332 ft. S, NW cor. NE, Sec. 31-14-14 ..... Drlg. 2,400 ft.

E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW, Sec. 30-12-15 ..... Coring 3,685 ft.

DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-13 ..... Rigging up.

Rudesceale et al's No. 3 Naboss, Sec. 6-12-11 ..... Dry and abnd. 1,310 ft.

Standard Oil Co. and Pelican Nat. Gas Co.'s No. 1 Sutherlin, 320 ft. N, 240 ft. W, SE cor. SW, Sec. 19-12-14 ..... Drlg. 3,003 ft.

Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13 .... S.D. 2,403 ft; repairing rig.

GRANT PARISH

Security Pet. Corp.'s No. 1 Swope est., Sec. 16-9-1e, 1,695 ft. N, 320 ft. E, SW cor. Sec. ..... W.O.S.R. 1,585 ft.

O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor., Sec. 16-9n-1e ..... Location.

NATCHITOCHES PARISH

W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec. ..... S.D. 1,875 ft.

Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11 ..... S.D. 1,875 ft.

R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 320 ft. N and W, SE cor. NW NW ..... Drlg. 1,700 ft.

H. W. Perritt's No. 1 Cook, 165 ft. E, 165 ft. N, SW cor. NE SW, Sec. 2-8-9 ..... S.D. for water 2,624 ft.

H. W. Perritt's No. 2 Brown Lbr. Co., 300 ft. N and W, from center Sec. 29-8-9 ..... Drlg. 2,534 ft.

Sabine Bayou Dev. Co.'s No. 1,130 Caw, 330 ft. N and E, SW cor. SE, Sec. 9-12-5 ..... Rigging up.

Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 560 ft. E, C, Sec. 22-5-6 ..... Washing to bottom 2,504 ft.

OUACHITA PARISH

Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 240 ft. S, NW cor. SW SE ..... Drlg. 3,460 ft.

RED RIVER PARISH

C. F. Davis' No. 1 Pierson, 500 ft. S, 317 ft. E, NW cor. SW NW, Sec. 12-14-11 ..... Location.

Lawrence Decker, tr.'s No. 1 Madden, 1,650 ft. S and W, NE cor., Sec. 31-14-10 ..... Rigging up.

La. Oil Dev. Co.'s No. 2 La. Delta Pecan Co., 2,950 ft. S, 300 ft. E, NW cor., Sec. 27-13-11 ..... Spudded and S.D. 50 ft.

RICHLAND PARISH

National Gas Co.'s No. 1 Singletary, 1,980 ft. N, 660 ft. W, SE cor., Sec. 20-18n-7e ..... S.D. 2,515 ft.

(Continued on Page 66)

Crude Oil Possibilities in Rocky Mountain Area Entirely Changed by New Development

By TOLBERT R. INGRAM
Staff Correspondent, California Fields

DENVER, Colo., July 5.—Another location in the north end of the Hobbs Pool was made this week by the Gypsy Oil Co., making the second following the completion of a good producer by the Amerada Petroleum Corp. Continental Oil Co.'s deep test on the Rattlesnake Dome in San Juan County is beginning to show oil while cleaning itself, but no test has been made. The appearance of oil in sands in the Wasatch formation of Tertiary age on the Hiawatha Dome in northwestern Colorado is looked upon as an unusually important development in that it indicates an immense area in the Rocky Mountain states holds out possibilities for oil in horizons that have received but little consideration in the past. Northeastern Colorado wildcats are attracting much attention as three of them are in or near the first important marker. Several additional tests are expected to get under way soon. The Magnolia Petroleum Co. has made a location for another well on Piceance Creek.

Settlement of litigation paves the way for early development of the Pine Mountain structure in Wyoming where no drilling has taken place for several years. The Midway Dome discovery well is showing an increase in production and No. 2 is drilling deeper. A tornado blew down some derricks in Big Horn Basin.

In Montana, the Ohio Oil Co.'s No. 8 Caldwell found the Dakota water bearing on the Dry Creek Dome and is going deeper. A small well in Kevin-Sunburst and a 150-bbl. well in the Buckley-Border Field were completed. Two locations were abandoned in the Whitlash district and another is coming in as a producer.

South Dakota has four wells active. The Utah Southern Oil Co.'s Ordovician test in Utah appears to have penetrated the salt beds and the Ohio Oil Co.'s test in the Aberdeen district in Washington is showing a little gas in shale.

NEW MEXICO

Lea County

Another offset to the Amerada Petroleum Corp.'s No. 1 Hardin, SW cor. Section 18-18-38, which marked a half-mile extension of the Hobbs Pool to the north when it was completed two weeks ago for 10,174 bbls. per day, was made this week in the Gypsy Oil Co.'s No. 2 Graham, NE cor. Section 24-18-37. Rig is being built. Empire Gas & Fuel Co.'s No. 4 Hardin, NW cor. Section 19-18-38, an offset to the Amerada well on the south, has rig completed and is ready to spud. One more offset is expected in Shell Petroleum Co.'s No. 1 Rice, SE cor. Section 13-18-37, but has not yet been announced.

Midwest Refining Co.'s No. 26 State, C SE NE Section 9-19-38, in the southeastern part of the field, is drilling at 3,940 feet. It topped the brown lime at 2,860 feet and is expected to be an early completion. Same company's No. 11 Byers, C NE NE Section 4-19-38, is drilling at 3,870 feet in lime, and its No. 29 Turner, C SE NW Section 34-18-38, an outside well, is drilling at 1,720 feet in anhydrite. It topped the anhydrite at 1,610 feet.

In the Lea district, The Texas Company's No. 3-A State, C Lot 2, Section 2-21-33, is drilling at 1,308 feet in lime and shells. It had some fresh water at 1,095 feet and an increase at 1,116-26 feet. It is drilling with cable tools.

In the Eunice area, the Tidal Oil Co.'s No. 1 State, C SW NE (corrected) Section 8-21-36, is still a location.

Eddy County

Flynn, Welch & Yates' No. 62 State, NW cor. SE Section 10-19-28, Artesia district, is drilling at 1,660 feet in red sand. This horizon was topped at 1,630 feet.

Leonard & Levers' No. 7 State-Levers, C SW SE Section 30-17-29, Jackson area, is drilling at 1,820 feet. Same firm's No. 5 State, CEL NE SE Section 20-17-29, which is being deepened from 2,242 feet, is drilling at 2,255 feet in lime. There was an increase in gas at 2,248, gauging 300,000 feet. Total gas is 1,000,000 feet. This well erroneously was reported as No. 4 last week.

Chaves County

R. D. Compton's No. 1 Emerson, SW SW SE Section 20-10s-24, Roswell district, is shut down at 153 feet. Drillers are reported to have gone off on a fishing trip. Warman Oil Trust's No. 1 Evans, N half, Section 15-14-25, Blackdom district, is shut down at 1,433 feet in black lime to finance.

De Baca County

Landowners Oil Co.'s No. 1 McAdoo, SW cor. NE Section 16-1s-27, Buffalo Creek, is drilling at 4,925 feet in gray shale and carrying the 6⅝-inch. Matador Oil Co.'s No. 1 Wood, NE SW SW Section 6-4n-20, Salada Creek, is bottomed at 4,666 feet and fishing for tools and drilling line.

Rio Arriba County

Goverardo Dome Oil Co.'s No. 1, NW NE SE Section 15-29-7w, cemented the 5½-inch at 2,070 feet and is drilling at 2,085 feet. It is supposed to be about on top of the first sand in the Farmington series.

San Juan County

Continental Oil Co.'s No. 24, SW NW SW Section 1-29-19, Rattlesnake Dome, is bottomed at a total depth of 7,370 feet and is swabbing and cleaning out. After cementing 7-inch at 6,505 feet and drilling out plug, it began flowing mud and water without any show of oil or gas. Some oil is now reported making its appearance, but no test has been made. Same company's No. 17, C NE Section 2-29-19, the discovery well, drilled deeper to 2,985 feet from 6,790 feet after having produced 360,000 bbls. of oil, was plugged back to the old horizon and conditions were not improved. An attempt is being made to pull the 4¾-inch and if this is successful, it will be lowered in an effort to shut off the water just above the old sand. When drilled in two years ago efforts were made without success to shut off the water.

Continental Oil Co.'s No. 29, Section 12-29-19, is preparing to run the producing string at 809 feet.

Southern Union Gas Co.'s No. 6 Angel Peak, NW cor. Lot 2, Section 11-28-11, Kutz Canon district, is shut down at 690 feet for repairs.

COLORADO

Definite information to the effect that the gas wells on the Hiawatha Dome in Moffat County, and across the line into Sweetwater County, Wyoming, are making oil is looked upon as a development of far greater significance than the probability that a new oil pool will be the result. The oil is coming from sands in the Wasatch formation of Tertiary age and this fact, in the opinion of men qualified to speak, changes the entire outlook for the development of large oil fields in the Rocky Mountain area. Until recent years few attempts have been made to develop production in the Tertiary and the operators as a rule did not look with favor upon such structures. This viewpoint has been changed in the past two or three years, not only by what is taking place in the Hiawatha Field, but by what has occurred in other tests in beds of Tertiary age. The opinion now is freely expressed that the Rocky Mountain states have hardly been scratched in the development of their possibilities and that when conditions are ripe wildcatting may be expected on a scale that will compare with any campaign in the past in search for light oil in the Cretaceous.

The Hiawatha wells which are showing oil on top of the structure flow by heads when opened after building up the pressure. They make from 6 to 8 bbls. at a head until the pressure is relieved. This oil apparently has channeled in from the flanks and when tests are drilled low enough on the structure to miss the heavy gas pressure and above the water line, some good producers are confidently expected. The Hiawatha fold covers a very large area upon which are a number of minor domes. Outcrops have been found showing a saturated sand 150 feet thick. This sand has not been tested. The Mesa Verde formation, of upper Cretaceous age, which lies below the Wasatch and above the lower Cretaceous in which most of the light oil production in the Rocky Mountain area has been developed, holds out tremendous possibilities. A few months ago the Ohio Oil Co. drilled a test for gas on the Craig Dome in Moffat County and encountered production in the base of the Mesa Verde. After the well was shut in it began to show some green oil. The Midwest Refining Co.'s test on the Bell Rock Dome, near the Craig structure, which developed 35,000,000 feet of gas per day in the Mesa Verde before the well was lost, also had good showings of oil. Magnolia Petroleum Co.'s test on the Piceance Creek structure in Rio Blanco County, also had shows of oil in the Green River, a formation younger than the Wasatch. On Powder Wash, 20 miles east of Hiawatha, a big flow of gas was opened up by the Ohio Oil Co. in the upper Wasatch, far above the objective. There are immense areas of Tertiary beds throughout the Rocky Mountain states and undoubtedly more attention will be given to their possibilities in the future than in the past.

Weld-Morgan Counties

Northeastern Colorado is showing a considerable increase in activity and restaurants and hotels at Buckingham, New Raymer and other towns are filled almost every day with scouts of oil companies, investors looking for royalties and people who follow a wildcat play. The wildcats now drilling are reaching interesting stages and as they near their objectives there are rumors of more tests to be drilled.

Manning & Terry's No. 1 Niles, C SE NE Section 13-6n-61, half a mile east of the nearest producer in the Greasewood Pool, a joint operation with Continental Oil Co. and Platte Valley Petroleum Co., drilled the Hygiene sand at approximately 3,210-3,420 feet and stopped to run and cement the 9-inch at 3,520 feet. The Hygiene was not cored and its depth may show some variation from that given. Due to possible deviations of the rotary hole from the vertical and the absence of a core test, it is not safe to make any comparisons with No. 1 Briggs farther to the west.

Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-70, a little more than half a mile northeast of No. 1 Niles, is coring in the Hygiene at 3,170 feet. The top was not given, but apparently the well is running a little higher than No. 1 Briggs. This well and No. 1 Niles are testing the eastern and northeastern sides of the Greasewood Pool and upon the outcome depends whether Greasewood will be proven to be a large pool, or small producer from the lenticular Muddy sand.

Farther northeast, in the New Raymer-Buckingham district where the major companies have more than 100,000 acres blocked up, the Tulsa-Fort Morgan Petroleum Co.'s No. 1 Anthes, C NE NE Section 24-8n-59, cemented 12½-inch at 2,008 feet and is bailing to test water shutoff. The Hygiene, the first important marker, is expected within the next 700 to 1,000 feet.

Ohio Oil Co. has been doing considerable coredrilling in the Buckingham district and it is reported the company is planning to drill a test, but no official announcement has yet been made.

Ramsey Petroleum Co. and Danciger Oil & Refining Co. are going ahead with plans for a test on a block of 6,800 acres 5 to 6 miles south of No. 1 Anthes, but location has not yet been released, although boilers are being moved in and preliminary plans are under way. It is generally expected the well will be spotted either in Section 14 or 15-7-59. Manning & Terry have the contract and Greeley Oil Co. will contribute part of the equipment from its No. 1 Gadbois. Ray Frank, vice president of the Ramsey company, is making his headquarters at Greeley.

Washington County

C. M. Smith and others' No. 1 Middlemist, SE SW SE Section 14-4s-56, Middlemist Dome, is resuming at 1,510 feet after taking over the operation from Middlemist Oil Co. and others. It has been standing for some time at 1,510 feet with 12½-inch on bottom. Bailing and cleaning out is in progress. The hole has been showing a little gas and it is believed to be bottomed near the top of the Hygiene. C. T. Lupton, who spotted the well, places the Dakota at around 4,500 feet.

Yuma County

Ira L. Keith and others, who recently took over the gas wells of Midfields Oil Co., drilled in 1923 and 1924, is now cleaning out and reconditioning No. 2, S half NE Section 17-2s-43. It has rigged and begun bailing and gives indications of coming back in good shape. It was originally drilled to the Dakota at 2,800 feet, where it had a show of oil, and was plugged back to 1,720 feet and completed as a gas well in sand at 1,600-1,700 feet. No. 4, Section 20-2s-43, which last week was reported making 250,000 feet of gas after being cleaned out and to have built up a pressure of 200 pounds in two hours, is improving. At last reports the pressure was up to 350 pounds and the flow of gas had increased to 350,000 feet per day. Tubing will be run to build up the flow pressure.

Arapahoe County

MacDeb Drilling Co.'s No. 1 Fitzsimmons, NE Section 7-4s-66, near Aurora, is resuming at 6,090 feet after making repairs and installing new cable. It has 50 feet of oil in the hole. A laboratory

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Adams County

Hills Dome Lease Development's No. 1 Hills, SE cor. Section 27-3s-64, near Watkins, cemented 8¼-inch at 3,987 feet and is preparing to resume. The company is negotiating for a string of 6⅝-inch to run and carry.

El Paso County

Colorado Springs Oil & Natural Gas Co.'s No. 2 Carson, NW NE NE Section 10-16s-66, Fountain district, is resuming at 2,000 feet after a shutdown due to accident to the head driller. It will drill to the top of the Dakota, expected at 2,200 feet, before running 8¼-inch. It had a good show of gas at 1,797-1,807 feet, stronger than in No. 1 at this depth.

Routt County

The Texas Company's No. 7 Quaintance-Hocking, NE SE Section 18-6n-86, Tow Creek, is bottomed at 3,640 feet and is cleaning out and bailing mud at 3,600 feet. The water level is 1,900 feet from the top. The 6⅝-inch is being carried.

Moffat County

William A. Myers and others' No. 1 State, NW SW SW Section 16-4n-101, Midland Ridge, which shut down for the winter at 2,950 feet, will resume and be drilled to completion at an early date.

Rio Blanco County

Magnolia Petroleum Co.'s No. 1 Gladys Titley, NW NW SW Section 15-2s-96, Piceance Creek, is a location. Rig and equipment from No. 1 Maddock, C NW SE Section 9-2s-96, recently completed as a gas well at 2,958 feet, is being moved to location. This test is about 1 mile southeast of the gasser. This structure, embracing 61,400 acres, is being developed as a unit, with all lease, permit and royalty owners and the Government parties to the agreement.

The California Co.'s No. 1 California-Raven, NW SE Section 30-2n-102, Rangely Dome, is drilling at 5,541 feet.

Montezuma County

Carl H. Smith and others' No. 1 West, NE NW NE Section 31-36n-17w, McElmo Dome, is drilling below 100 feet. The location is just east of a major fault which has a displacement of 45 feet.

WYOMING

Natrona County

Litigation which has held back the development of the Pine Mountain Dome in Townships 34 and 35n, Ranges 83 and 84w, about 30 miles northwest of Casper, for several years probably will be ended as a result of a decision by Judge T. Blake Kennedy, in the Federal District Court at Cheyenne on June 16 in which he awarded the Alaska Development Co. a judgment for $74,000 against Dillard B. Baker, trustee, and the Pine Dome Products Co. This dome is a large faulted structure on which gas has been developed in the Embar and Tensleep formations and some black oil unusually high in lubricants in the lower horizons. A discovery of light oil at 2,824 feet, probably in the Madison, was made in one well. This probably is the only occurrence of light oil below the Cloverly reported in Wyoming. The field has not been developed to any extent and little drilling has taken place since 1926, due to litigation and clouded titles. It is believed the settlement of this litigation will pave the way for additional development. Roy L. Rush, of Casper, was appointed receiver for the Pine Dome Products Co. with a bond fixed at $10,000.

Mutual Oil Syndicate's No. 2, C SW SE Section 14-35-79, Midway Dome, failed to show any commercial production when bailed down and the hole was deepened to 5,325 feet, having cut 93 feet of the second Frontier at that depth and still in sand. The cores showed considerable gas, more than in No. 1, but no oil or water. Conditions are different from what was found in No. 1, which had only 68 feet of this sand. Coring has been resumed and the hole will be carried to the bottom and possibly to the Muddy. While the two wells are only one-fourth mile apart, they do not log exactly the same, believed to be due to a faulted condition. No. 1, the discovery well, has been showing an increase in production, and on June 21 gauged 211 bbls. in 24 hours. For a while it had dropped below 100 bbls. per day.

Western Producers, Inc.'s No. 1 Consolidated Royalty, SW SW Section 27-40-79, is shut down at 1,900 feet. The broken shale horizon at 1,950 feet is the objective.

Converse County

Continental Oil Co.'s No. 30 Glenrock, SW SE SE Section 4-33-76, Big Muddy, is drilling at 4,258 feet in sandy shale and nearing the objective Lakota which produced 345 bbls. initial at 4,364 feet in No. 5 Jones, an offset on the south. Ohio Oil Co.'s No. 25 Kinney, SE SW SW Section 4-33-76, is drilling at 3,018 feet. Converse Oil & Gas Co.'s No. 1 Carlson, C SW SW Section 27-33-73, Alkali Creek, is bottomed at 2,500 feet with the 10-inch cemented at 2,020 feet. Three thousand feet of 8¼-inch is on location and the hole will be carried to 4,500 feet if necessary.

Niobrara County

Continental Oil Co.'s No. 4 Rohlf, NW SW SW Section 32-36-65, Lance Creek, an old producer being deepened, is bottomed at 3,170 feet in the Dakota sand and making gas, oil and water. An attempt is being made to shut off the water and increase the gas.

Interstate Oil & Refining Co.'s No. 1, Section 2-39-61, West Mule Creek, joint with Fall River Royalty & Producers Co., resumed recently and is drilling below 1,000 feet. This well was started last summer with standard equipment to make a deep test to the Minnelusa and possibly the Madison lime.

Weston County

Litigation between Lambie Oil Co. and Yale Oil Corp. to obtain a legal decision on the meaning of "posted field price" on Osage crude is reported to have been settled out of court. The Lambie company had a contract with the Yale company to supply crude to the latter for its Montana refineries at the posted field price and the disagreement was over the interpretation of that term.

The Osage Oil Producers Association, in conjunction with the Black Hills Mining and Industrial Association, is planning for a big celebration Sunday, July 10 when the last named organization will hold a meeting at Osage. The program includes a barbecue, a ball game, an air circus at the flying field in the new town of Oil City and a night meeting of the Black Hills Association in Legion Hall in Osage. A large crowd is expected and Frank V. Eaton, the veteran oil man who supplies The Oil and Gas Journal with news on operations in that district, says that all who attend will have a good time.

There were no completions reported this week. Riggs Oil Co.'s No. 2, CEL SE NE Section 16-46-64, set 15½-inch at 150 feet and is drilling ahead. Federal Oil Co.'s No. 3, SE NE SE Section 15-46-64, is rigged and ready to spud, and West Osage Oil Co.'s No. 3, SE NW SE Section 13-46-64, is drilling at 1,400 feet. Yellowstone Oil Co.'s No. 2, NE NW Section 23-46-64, is drilling out plug after cementing 8¼-inch, and General Oil Co.'s No. 1, SW cor. NW Section 15-46-64, is spudding. Central Oil Co.'s No. 1, NE cor. SW Section 15-46-64, is shut down to skid rig, and Lambie Oil Co.'s No. 8 Bock, SW cor. NW Section 14-46-64, is fishing. Chadron-Osage Oil Co.'s No. 17, SW NW SW Section 14-46-64, is ready to drill in after cementing the 6⅝-inch on top of the sand. Carl Cundy's No. 3, NE NW NE Section 31-46-63, is drilling at 800 feet.

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fiddler Creek, is drilling at 4,200 feet and is reported to have begun showing some gas at 4,134 feet.

Crook County

The Wy-Tex Corp. is reported to have

taken over to complete Northwest Oil & Gas Co.'s No. 1 Wolff, NW cor. Section 6-54-60, Oak Creek, which has been standing at 1,585 feet in the Opeche sandstone, 60 feet above the objective Minnelusa.

Big Horn County

A small but forceful tornado made a sweep across the Byron-Garland district Saturday afternoon and blew down the derricks on the Producers & Refiners-Kinney-Coastal Oil Co.'s well and the Portland Syndicate's well. The two wells of Ohio Oil Co. and Utah Southern Oil Co. had only cleanout machines over the holes and no damage was done.

W. O. Taylor and others' No. 1 Hoskins, Lot 5, Section 25-56-97, Byron district, is rigged and ready to spud. This will be drilled with rotary. Lovell Dome Association's No. 1 Sheets, Lot 2, Section 9-55-96, has resumed after setting the 15½-inch at 607 feet.

Washakie County

Bales Oil Trust's No. 1 Brome, NE NW Section 31-48-80, Hidden Dome, is drilling at 1,300 feet after cementing pipe at 1,100 feet. Second Frontier is expected at 1,600 feet.

Carbon County

Midwest Refining Co.'s No. 27 Union Pacific, NW SE SE Section 11-20-81, Elk Mountain, is coring at 4,210 feet probably in the Dakota with some gas showing. Lost Soldier Producing Co.'s No. 1, NE NE Section 25-26-88, Mahoney Dome, is drilling on iron at 3,765 feet in the base of the Sundance.

Fremont County

The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, spudded with 18-inch bit on June 26 and will cement the 13⅜-inch at 400 feet. This is a rotary operation. G. H. Vaughn has the contract.

Ward Oil & Gas Co.'s No. 2, NE cor. Section 28-34-90, Dutton Basin, is shut down in shale at 2,700 feet to erect tankage. It is showing some gas. The Wall Creek is erpected within the next 100 feet.

Yellowstone Oil Co.'s No. 1 Gabus, SW cor. Section 14-38-94, Shoshoni district, is drilling at 1,900 feet.

Sublet County

California Petroleum Corp.'s No. 6-L, SE cor. SW Section 34-27-113, La Barge district, is bottomed at 625 feet, waiting for cement to set.

Sweetwater County

Wyoming-California Petroleum Co.'s No. 1, SE SE Section 23-17-104, Baxter Basin, is drilling below 3,540 feet.

Uinta County

Trans-Western Petroleum Corp., Ltd.'s No. 1, C SE Section 6-14-118, Aspen district, cemented off bit and is drilling close to 4,000 feet. Park City Oil & Gas Syndicate's No. 1 Christensen, NE cor. Section 6-15-113, Lyman district, cemented casing at 2,968 feet with 60 sacks on top of sand and is resuming.

MONTANA

Carbon County

Ohio Oil Co.'s No. 8 Caldwell, SE SW NE Section 12-7s-21, Dry Creek Dome, is drilling at 5,539 feet after going through 16 feet of Dakota sand which carried water and is headed for the Lakota. The location is on the east side of the field about one-third of a mile to the west of Carbon Oil & Gas Co.'s No. 1 Armstrong, which came in for 1,800 bbls. daily in the Dakota. No. 8 Caldwell had considerable gas and some oil in the Frontier, but did not stop to test. Same company's No. 7 Robinson, C SE SE Section 3-7s-21, is drilling at 5,282 feet in shale, and its No. 11 Bowman, C SE NE Section 4-7s-21, is drilling at 3,005 feet.

Carbon Oil & Gas Co.'s No. 1 McMinn, NW SW SW Section 7-7s-22, is shut down at 4,479 feet, and its No. 1 Armstrong, SW cor. NW Section 7-7s-22, is still trying to shut off bottom water.

Liberty County

Whitlash Petroleum Co.'s No. 1 Hicks, CWL NW NE Section 26-37-4e, a west offset to Western Natural Gas Co.'s No. 1 Hicks, the discovery well, cemented 8¼-inch at 1,635 feet and drilled into the first sand at 1,653 feet. This sand showed saturation, but drilling is continuing to the second sand which was the largest producer of the two in the discovery well. R. C. White's No. 1 Hicks, C NE NE Section 26-37-4e, is an abandoned location, but may be revived if some of the nearby tests come in as producers. H. L. Postlewaite's No. 1 Hicks, C SW NE Section 26-37-4e, is spudding at 180 feet, and Casper Oien's No. 1 Hicks, C SE NE Section 26-37-4e, is spudding at 100 feet. Teter & Strawn's No. 1 Hicks, C SW SW Section 24-37-4e, is an abandoned location. A. E. Crumley's No. 1 Strode, C NW NE Section 35-37-4e, is spudding at 300 feet.

Glacier County

The Texas Company's No. 1 Peterson, SW NE SE Section 22-36-5w, Cut Bank district, is rigging up. J. T. Finn's No. 1 McLellan, NW cor. SE Section 12-34-6w, has received some more equipment, but has not yet spudded. R. C. Tarrant's No. 1 Reickhoff, SE SW NE Section 3-34-6w, is partly rigged and shut down awaiting completion of No. 1 Hogland, NW cor. SW Section 13-34-6w, which is sidetracking joint of pipe at 2,833 feet.

Milk River Petroleum Co.'s No. 1 Blackfoot, SW NE NE Section 28-36-12w, Milk River district, is rigging up rotary to resume at 2,956 feet.

Toole County

Askalta Oil Co.'s No. 3 Farbo, SE SW NE Section 2-37-4w, Buckley-Border Field, is reported to have topped the pay at 2,525 feet and estimated to be good for 150 bbls. It is a west offset to No. 2 Farbo, which made 200 bbls. initial.

Pfabe & Engelking's No. 2 Seabrook, NE SE SE Section 19-35-2w, Kevin-Sunburst Field, is estimated good for 15 bbls. per day on the pump from the Ellis at 1,507-22 feet after a small shot.

The Texas Company's No. 1 International Land Co., C S half SW Section 6-36-4w, Cut Bank district, is drilling at 1,810 feet.

Teton County

California Co.'s No. 1 Sullivan, NW NE NW Section 34-27-7w, Bynum district, is drilling at 3,265 feet.

Yellowstone County

Spokane-Laurel Oil Co.'s No. 1 Nutting, SW cor. SE Section 30-2s-24, Laurel district, is running 8¼-inch to set on shell at 610 feet. It is below the second Frontier. The hole has cleaned itself several times below 580 feet with gas from pockets.

SOUTH DAKOTA

J. H. Voorhees and others' No. 1, SW SE SE Section 35-9n-3e, Crow Creek district, Butte County, spudded and shut down. Barker Structure Drilling Co.'s No. 3, NE cor. SW Section 34-6s-2e, Barker Dome, Custer County, had a show of gas at 1,400 feet and cemented pipe. This is near the discovery well which will pump 2 bbls. per day. Chadron-Osage Oil Co.'s No. 1 Moody ranch, NE cor. SW Section 6-12s-6e, Fall River County, is drilling at 2,365 feet in a dry sand. Wytex Oil & Gas Co.'s No. 1 Hamilton, Section 32-8n-1e, Oak Creek, Butte County, is drilling at 1,300 feet with the Minnelusa as the objective.

UTAH

Utah Southern Oil Co.'s No. 1 Balsey, C NE NE Section 31-23-21, Salt Valley structure in Grand County, is drilling at 5,450 feet in shale and anhydrite and has not picked up any salt below 5,350 feet. This is a test of the Ordovician below the salt beds, the latter being of unknown thickness, but of which more than 3,500 feet has been drilled.

WASHINGTON

The Ohio Oil Co.'s No. 1-A Robinson, Section 5-17n-9w, Aberdeen district, Gray's Harbor County, is bottomed at 1,917 feet and straightening a crooked hole. It has a show of gas in shale. Unofficial reports have been circulated that this test cored a saturated sand below 1,500 feet, but representatives of the company are quoted as saying that if anything important is found it will be given to the public. It is a joint test with Gray-Tac Oil Co.

Leslie Petroleum Co.'s No. 1 Sims, Section 12-26n-14w, Hoh River district, Jefferson County, is drilling below 2,000 feet with an increased show of oil and gas, the pressure being sufficient to force the mud out of the hole. This well had a discovery of oil last November at 805 feet with approximately 50 bbls. capacity from several sands above 1,200 feet. C. T. Lupton, consulting geologist of Denver, who geologized this structure in 1913, has returned to Denver after doing some reconnaissance work in that state and brought with him a sample of the oil from the Hoh River well. It is light amber in color and appears to be of excellent quality.

Mordello L. Vincent and others' No. 1 Olympic, NW SW Section 9-28n-14w, Quillayute Prairie, Clallam County, which has been shut down at 2,940 feet with a show of gas, built up a pressure of 112 pounds through 600 feet of water in 1-inch tubing.

Miocene Petroleum Co.'s No. 1, NE NW Section 17-12-19, Union Gap, Yakima County, when shut in builds up a pressure of 450 pounds through a hole full of water. It has been making a show of gas through the water at a total depth of 2,600 feet and is standing waiting for a string of 4¾-inch for a water shutoff. C. T. Lupton made the location for this test in 1927.

OREGON

The Northwest Petroleum Corp.'s No. 1, Section 23-11-21, Mitchell district, Wheeler County, is drilling at 250 feet in a 15½-inch hole.

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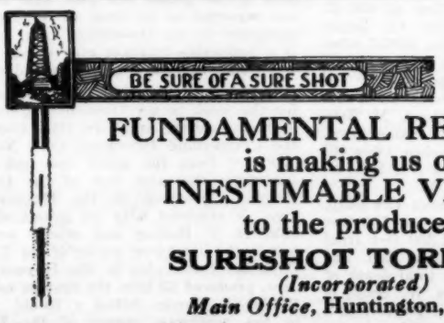

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Shipments From Gulf Coast Ports Gain Owing to Movement of Products

HOUSTON, Tex., July 2.—Shipments of oil from Gulf Coast ports during May totaled 21,264,176.20 bbls., an increase of 1,855,574.54 bbls. as compared with April. The gain was due largely to a heavier movement of refined products, both for coastwise and export trade. The latter was true despite the fact export demand for gasoline has materially dropped due to competition of Rumanian gasolines. Export liftings of crude also increased slightly although coastwise trade in crude fell off. Shipments by companies were:

Company and port—	Crude—Coastwise (bbls.)	Crude—Export (bbls.)	Refined—Coastwise (bbls.)	Refined—Export (bbls.)	Total (bbls.)
Atlantic Oil Prod. Co., Atreco.	1,150,369.15	.....	4,838.57	.....	1,157,207.72
Gulf Ref. Co., Port Arthur....	199,936.61	.....	1,675,687.71	2,451.86	1,878,076.18
Humble O. & R. Co., Baytown	115,599.00	.....	1,842,543.04	1,795,016.47	3,753,158.51
Humble O. & R. Co., Harbor Isl.	1,962,235.00	.....	.....	.....	1,962,235.00
Humble O. & R. Co., Ingleside	125,962.00	.....	.....	.....	125,962.00
Humble O. & R. Co., Tex. City	478,412.00	.....	.....	.....	478,412.00
Magnolia Pet. Co., Beaumont.	*800,088.86	.....	*1,571,229.47	.....	2,071,318.33
Pure Oil Co., Smith's Bluff...	508,265.90	167,127.11	631,856.91	3,914.47	1,311,174.39
Standard Oil (La.), B. Rouge.	503,896.00	.....	983,762.00	911,918.00	2,399,576.00
Sun Oil Co., Sabine Pass.....	1,396,299.07	.....	.....	.....	1,396,299.07
The Texas Co., Port Arthur..	1,141,145.00	611,371.00	2,255,053.00	723,188.00	4,730,757.00
Total May	8,082,208.59	778,498.11	8,966,970.70	3,436,488.80	21,264,176.20
Total April	8,502,170.63	752,404.34	7,891,262.66	2,272,664.03	19,408,601.66
Difference	419,962.04	26,103.77	1,085,608.04	1,163,824.77	1,855,574.54

*Includes coastwise and export shipments.

Central West Fields

(Continued from Page 53)

Township, also in Stark County. Wittmer Oil & Gas Co. has a rig on the Blanch Connell farm, Section 24, Lawrence Township, same county.

In Guernsey County George Jewell and others are drilling No. 3 on the Howard Stock farm, in the Fourth-Quarter of Cambridge Township.

Frick and others are drilling on the W. M. Murdock farm, Section 33, Rome Township, Lawrence County. Same company is drilling around 1,000 feet on the Haner Brothers farm, Section 27, same township. Arabaugh and others' No. 2 on the Mary Guthrie farm, Section 21, Rome Township, is a location.

INDIANA

An unusually large producer was drilled in by the Big Four Oil & Gas Co. in No. 6 in the southeast corner of the Catherine Sloan farm, SE Section 18, Washington Township, Gibson County, with an initial production of 185 bbls. from 1,278-86 feet. Reports are out that another well will be started on the same farm. This company is drilling No. 3 on the Lottie Hope farm, same quarter-section. No. 2 on the Robert Huey farm, same area, is expected to be started soon. Nelson Brothers hit a dry hole in the southeast corner of the Mary R. Richardson farm, NE Section 19, same township. Big Four Oil & Gas Co. is drilling on the Elmer Hunt farm, NE Section 19, also in Washington Township, same county.

In Pike County, P. C. Andrews' No. 12 well, 200 feet from the south line and 600 feet from the west line of the E. Loveless farm, NE Section 14, Logan Township, produced 50 bbls. initial after being shot with 60 quarts from 1,030-51 feet. In Monroe Township, Murphy Oil Co. abandoned No. 1 L. Seiple farm, SE Section 14, and No. 5 on the A. M. Henning farm, NE Section 27, same township. In Washington Township, Ohio Oil Co. and Bement abandoned No. 1 L. C. Thomas farm, SW Section 32.

In Sullivan County, Turman Township, Wyman & Brown drilled a test 150 feet from the north line and 1,300 feet from the east line of the William Bell, Jr., farm, NE Section 23, at a total depth of 825 feet and dry. Charles W. Scott is drilling No. 7 on the C. L. Davis No. 2 farm, Section 14, same township.

ILLINOIS

The Illinois fields failed to report any new completions, few wells are drilling and a number shut down, and abandoned wells were all that were announced. In Wabash County there is some talk of further test work in hope of widening out the old Allendale Field, which proved a fairly rich pool when active operations were going on.

In Bridgeport Township, Lawrence County, Snowden-McSweeney Co. has abandoned No. 43 on the C. B. O'Donnell farm, SE Section 17.

In the southwestern part of the state, in the Dupo Field of St. Clair County, southeast of East St. Louis, the St. Clair County Oil Co. abandoned No. 3 Fred Metter farm, SE Section 34, Sugar Loaf Township, and Kroeger and others did the same with Nos. 1 and 2, also on the Fred Metter farm, northeast quarter of the same section.

KENTUCKY

Although the amount of oil pumped in the Owensboro Field during June is approximately the same as the total for the same period of 1931, the income received by the operators and landowners will show an increase of more than 100 per cent. The present price of West Kentucky crude is $1.05 a barrel compared with the quotation of 50 cents a barrel last June. Due to pumping restrictions enforced by the pipe lines the amount of oil taken in the field is now estimated at less than 75 per cent of the production. A year ago, when the price was down to 50 cents, the pipe lines were accepting a larger per cent, but the operators were then observing a voluntary curtailment policy in pumping and drilling which kept the production below the field's maximum.

The present estimated daily runs of the pipe lines serving the Owensboro Field, covering several counties, total between 4,200 and 4,500 bbls. At the current price this production brings in approximately $135,000 a month compared with the approximately $64,500 received over a like period one year ago. There are reported to be close to 30 rigs in operation in the Owensboro area, which is a noticeable increase over a year ago when only necessary drilling was done.

There was a scarcity of completions for the week in the Owensboro Field as well as over the state. In Ohio County, the Cumberland Petroleum Co.'s No. 7, 400 feet from the north line and 150 feet from the west line of the David Brooks 120 acres, in the Haynesville area, is reported with an initial of 90 bbls. D. T. Bolling and others' second test in the northwest corner of the J. W. Christian farm, also in the Haynesville area, produced 25 bbls. the first 24 hours. Bolling & Humes drilled a 25-bbl. well in the northwest corner of the Dave Christian farm, same pool.

In the Pellville Field of Hancock County, Vicers and others' test in the southeast corner of the William McIntosh 100 acres, proved a duster.

Reports from the Sebree Field in Webster County are that the Security Oil & Gas Co.'s No. 8 Dink Curry farm, and No. 2 Harkins farm, are both gas wells.

DOMESTIC EXPORTS OF PETROLEUM AND REFINED PRODUCTS

	Month of April— 1931	Month of April— 1932	4 months ending April— 1931	4 months ending April— 1932
Petroleum:				
Crude ..... Bbls.	1,826,813	2,866,774	7,040,603	8,442,346
Crude ..... $	1,546,021	2,785,480	7,012,685	7,864,576
Total refined petroleum ..... Bbls.	7,508,858	6,931,154	30,703,163	25,474,362
Total refined petroleum ..... $	20,522,956	15,865,691	86,115,240	60,370,529
Gasoline, naphtha and other light products ..... Bbls.	3,947,745	3,567,972	15,036,514	12,607,384
Gasoline, naphtha and other light products ..... $	10,367,755	8,324,206	43,141,861	29,301,629
Oils, illuminating ..... Bbls.	753,088	578,473	4,153,887	3,458,738
Oils, illuminating ..... $	2,499,527	1,461,764	12,410,312	7,774,959
Gas and fuel ..... Bbls.	2,093,961	2,245,488	9,009,640	7,953,369
Gas and fuel ..... $	2,010,462	2,008,496	8,424,702	5,823,867
Lubricating ..... Bbls.	705,214	531,643	3,469,230	2,322,858
Lubricating ..... $	5,555,613	4,001,284	21,684,269	17,086,992
Other refined petroleum ..... Bbls.	8,880	7,578	33,892	32,044
Other refined petroleum ..... $	101,609	69,941	434,095	284,052
Paraffin wax ..... Lbs.	21,365,874	18,873,988	97,398,574	75,229,311
Paraffin wax ..... $	639,379	519,475	3,022,924	2,083,878

Gulf Coast Fields and Wildcats

(Continued from Page 48)

Humble O. & R. Co. and Gulf Prod. Co.'s No. 4 Lockwood, J. Rabb Sur., 3,000 ft. E and 330 ft. N of SW cor. of tract ..... Rig.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 4-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. E. 300 ft. N of SW cor. of Tr. 3 ..... Drlg. shale 3,096 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 5-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. W. 300 ft. N of SE cor. of Tr. 2 (469.3 ac.) ..... Drlg. shale 5,220 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 6-A Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 330 ft. from N line of 469-acre tract ..... Derrick.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 3-B Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from E line and 300 ft. from N line of Tr. 1 (938.75 ac.).. Location.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 4 George, J. Rabb Sur., 3,000 ft. E, 332 ft. S of NW cor. of 300-ac. tr. ..... Set 299 ft. 10-in. screen; comp. flowing 88 bbls. hourly, 225 lbs. pressure through two ¾-in. chokes.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 1-B George, J. Rabb Sur., 1,950 ft. from W line, 350 ft. from N line of tr. ..... Set 229 ft. of screen and liner 5,310 ft.; comp. flowing 55 bbls. hourly, 460 lbs. pressure, ¾-in. choke.

The Texas Co.'s No. 1 Wolters (M. H. Gubbels), Samuel Kennedy Sur., 742 ft. from W line, 100 ft. from S line of 100-ac. tract ..... Drlg. sand with streaks of shale 4,658 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 28 Cade, N. Fitzsimmons Sur., 600 ft. S, 150 ft. E from No. 26, ... Sand and shale 5,503 ft.; cmtd. 7-in. csg. 5,502 ft.

Yount Lee Oil Co.'s No. 29 Cade, N. Fitzsimmons Sur., 300 ft. E of No. 27 and 240 ft. N of No. 16 ..... Drlg. sand and lime 4,905 ft.

Yount Lee Oil Co.'s No. 2 Broussard & Orme, Martin Duman Sur., 300 ft. SE of No. 1 ..... Drlg. hard sand 2,920 ft.

Yount Lee Oil Co.'s No. 11 Smith, Martin Dunman Sur., 130 ft. E of No. 3 and 440 ft. N of No. 5 ..... Drlg. shale 4,115 ft.

Yount Lee Oil Co.'s No. 2 Nellie League, Martin Dunman Sur., 230 ft. N of No. 1 and 300 ft. E ..... Drlg. hard sand 4,025 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 140-A Cotton ..... Cmtd. csg. 581 ft.

HUMBLE—HARRIS COUNTY

J. D. Clay's No. 1 Bender, Robert Dunman Sur., 200 ft. from W line and 100 ft. from S line of 100-acre tract ..... Rigging up to pump 1,188 ft.

Sun Oil Co.'s No. 26 Bender (D.D.), W. B. Adams Sur... Dry and abnd. 4,577 ft.

Sun Oil Co.'s No. 54 River, Robert Dunman Sur., 50 ft. from E line and 395 ft. from S line ..... Drlg. shale 1,065 ft.

The Texas Co.'s No. 26 House, Mary Owens Sur., 100 ft. W of No. 20 ..... Drlg. sticky shale and boulders 2,887 ft.

The Texas Company's No. 25 Wheeler & Pickens (W.O.).. T.D. 1,751 ft. in cap rock; reamed to 1,326 ft.; cmtd. 7-in. (O.D.) csg to test.

E. M. Wilson's No. 10 W. & P.-Texas fee, 50 ft. E line, 40 ft. from N line of Blk. 23, J. B. Stevenson Sur... No report.

PIERCE JUNCTION—HARRIS COUNTY

Abercrombie & Harrison's No. 2 Ritter (D.D.), Jas. Hamilton Sur. No. 51 ..... T.D. 5,437 ft.; set 3 jts. 4½-in. screen 4,646 ft.; comp. pumping 15 bbls. net oil, 90 per cent water.

Gulf Production Co.'s No. 35 Taylor, Hamilton Sur. No. 52, 50 ft. S of No. 1 ..... Cmtd. 10-in. csg. 1,365 ft.

Navarro Oil Co.'s No. 15 Dooley-Tex. Esp. (D.D.), Jas. Hamilton Sur. No. 51, 50 ft. from W line, 1,278 ft. from S line of tr. ..... Comp. pumping 75 bbls. net oil.

Rio Bravo Oil Co.'s No. 24-A Settegast, J. Kopman Sur. No. 44, 1,900 ft. S and 200 ft. W of NE cor. of "A" lease ..... T.D. 4,533 ft.; sidetracked 4,283 ft. to sand 4,452-64 ft.; cmtd. 4½-in. csg.

Rio Bravo Oil Co.'s No. 25-A Settegast, J. Kopman Sur. No. 44 (location check to come) ..... Derrick.

S. B. Ward's No. 1 Mowery, J. Hamilton Sur. No. 53, 300 ft. from W line, 60 ft. from N line of 24-ac. tr... Shut down 420 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 5 Davis (D.D.), Kokernut Sur., 150 ft. from S line, 1,197 ft. from E line of tract ..... No report.

Cranfill & Reynolds' No. 5 Esperson (W.O.), M. Duncan Sur., 100 ft. N line and 300 ft. E line ..... No report.

Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 500 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff ..... Location.

HULL—LIBERTY COUNTY

Aberoil Co., Inc.'s No. 1 fee, Jesse DeVore Sur., 700 ft. from E line and 64 ft. from N line ..... Rigging up.

Eclipse Oil Co., No. 2 Barrow, Jesse Devore Sur., 55 ft. W, 35 ft. S of most easterly NE cor. 2.7-ac. tract.... Drlg. shale 4,975 ft.

Eclipse Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse DeVore Sur., 30 ft. from N line and midway E and W of ½-acre tract ..... Location.

Hannah Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah ..... Spudded and shut down.

D. & L. Prod. Co. and Bashara Oil Co.'s No. 1 Pevito, Jesse Devore Sur., 34½ ft. from E line and 30 ft. from N line of 5-acre strip ..... T.D. 4,553 ft.; csg. collapsed; pulled derrick in.

D. & L. Prod. Co.'s No. 3 Mecom & Layton, Jesse DeVore Sur., 80 ft. from S line, 60 ft. from W line of 3-ac. tr. ..... Rig.

Healey & Southerland's No. 1 Findley, Jesse DeVore Sur., 50 ft. from E line and 100 ft. from N line of 4-ac. tr. ..... Drlg. 1,100 ft.

Houston Prod. Co's No. 1 Baldwin, Jesse DeVore Sur., 223 ft. from S line and 50 ft. from E line of 5-acre tract ..... Location.
Republic Prod. Co.'s No. 51-A Dolbear, Jesse DeVore Sur., 25 ft. N of No. 55 ..... Drlg. hard sand 1,920 ft.
Republic Prod. Co.'s No. 146 Dolbear, Jesse DeVore Sur., midway between and in line with Nos. 18 and 86 .. Spudded.

MARKHAM—MATAGORDA COUNTY

Harvey Smith et al's No. 1 W. H. Gray (W.O.), Wm. Hadden Sur., 400 ft. from S line, 150 ft. from E line of Blk. 2 ..... Set 15 ft. of 4½-in. screen 3,623 ft.; tested S.W.; pulling screen.
Southern Drlg. & Prod. Co.'s No. 1 Hudson, Henry Parker Sur., 233 ft. from E line and 370 ft. from N line of Blk. 4 ..... Abnd. in salt 3,461 ft.
The Texas Company's No. 1 Texas Pipe Line Co., Wm. Hadden Sur., Blk. 5, 50 ft. S and 50 ft. W of NE cor. of tract ..... Dry and abnd 3,682 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Hogg et al's No. 1 Hogg, Martin Varner Sur., 1,250 ft. N and 125 ft. E of Sw cor. of Gulf, W. C. Hogg 200 ac. ..... Drlg. 4,100 ft.

PORT NECHES—ORANGE COUNTY

The Texas Co.'s No. 3 Stark, 350 ft. E, 100 ft. N of SW cor. of Marshall Beauchamp Sur. ..... Drlg. sticky shale 2,250 ft.

ORANGE—ORANGE COUNTY

Orange Pet. Co.'s No. 13 Chesson (W.O.) ..... No report.
Sun Oil Co.'s No. 1 Bellle (D.D.) ..... No report.

REFUGIO—REFUGIO COUNTY

R. M. Jones' No. 1-B Mitchell (D.D.), 250 ft. NW of SE line and 250 ft. SW of Mission River ..... Sand showing oil 9,121 ft.; cmtd. 5¾-in. csg. and 100 ft. screen (one string).
Houston Oil Co.'s No. 2 F. Rooke (W.O.), T. Mullen Sur. .. Drlg. sand and shale 3,625 ft.
Larco Gas Co.'s No. 5 Strauch, Refugio Town tract, Lot 5, Blk. 2, 100 ft. W of No. 2 ..... Set screen 5,557 ft.
United Prod. Corp.'s No. 4 W. J. Fox, 2,600 ft. NE along SE line from SE cor. of Wm. Hews and L. Brown Sur., thence 1,420 ft. NW at right angles ... T.D. 6,560 ft; plugged back.

CLAY CREEK—WASHINGTON COUNTY

Nicholson Oil Corp.'s No. 1 Bimage, C of E½ of J. F. Perry Sur., 200 ft. from W line and 1,300 ft. from S line of 242-ac. tract ..... No report.
John Walker et al's No. 1 Henry Wendt, J. F. Perry Sur., 150 ft. from SW line and 405 ft. from SE line of tract ..... S.D. 1,254 ft.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Reliable Oil Co.'s No. 1 Haber, 50 ft. N and 50 ft. W of SE cor., Lot 4, Blk. 12, Sec. 46-9s-2w ..... Sand and shale 1,909-27 ft.; pumped S.W.; shut down.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 2 Waite, 330 ft. out of NE cor. SE, Sec. 12-9s-7w ..... Cmtd. 13⅜-in. csg. 1,155 ft.

EDGERLY—CALCASIEU PARISH

C. M. Crotty Oil Co.'s No. 7 Lillard (W.O.) ..... T.D. 2,530 ft.; S.D.

LOCKPORT—CALCASIEU PARISH

Union Sulphur Co.'s No. 3 Martha Moss, 300 ft. W, 150 ft. S, NE cor. NW SE, Sec. 8-10s-9w ..... Drlg. shale 5,096 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 751 fee (D.D.), Sec. 29-9s-10w .. Salt. 4,344-4,494 ft.; drlg. sidetracked hole; sandy shale 3,320 ft.
Union Sulphur Co.'s No. 769 fee, 295 ft. S, 918 ft. W of C of Sec. 29-9s-10w ..... Salt 6,053 ft.; sidetracking 4,705 ft.
Union Sulphur Co.'s No. 770 fee, 292 ft. S, 1,243 ft. W of center, Sec. 29-9s-10w ..... Location.
Union Sulphur Co.'s No. 771 fee, 431 ft. S, 340 ft. W of center, Sec. 29-9s-10w ..... Sand 5,152-61 ft.; comp. flowing 3,500 bbls. of P.L. oil, 500 lbs. pressure, ¾-in. choke.
Union Sulphur Co.'s No. 772 fee, 145 ft. S, 882 ft. W of center, Sec. 29-9s-10w ..... Location.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 6 Gray, Sec. 33-10s-12w, 160 ft. W of No. 3 ..... Rig.
Vinton Pet. Co.'s No. 5 Matilda Gray (D.D.), 456 ft. W, 362 ft. N, SE cor. SW NE, Sec. 33-10s-12w ..... Set 1 jt. of 3-in. screen 3,667 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 34 Watkins, 435 ft. E, 430 ft. S, NW cor., Sec. 24-12s-10w ..... Derrick.
Lackawanna Oil Co.'s No. 1 Ellender, 320 ft. S and 150 ft. E of NW cor. of SE SE of Sec. 21-12s-10w ..... Derrick.
Moon Oil Co.'s (R. E. Seiss') No. 1 Breaux, 1,300 ft. N, 150 ft. E of NW cor. of 61-ac. tr., Blk. 26, Sec. 46-12s-10w ..... Drlg. shale and lime 2,700 ft.
Pop Oil Co.'s No. 1 Ellender, 617 ft. N and 931 ft. W of SE cor. NE, Sec. 19-12s-10w ..... Rigging.
Sultex Oil Co.'s No. 1 Dorion, 181 ft. W, 12 ft. N of junction of W line of Sec. 46-12s-10w and S bank of Kelso Bayou in Sec. 36 ..... T.D. 4,328 ft.; sidetracked at 996 ft.; drlg. sand and shale 4,096 ft.
J. D. Sutton's No. 7 Irwin, 1,820 ft. N and 1,490 ft. W of SE cor. of Sec. 13-12s-10w ..... Set 1 jt. 4½-in. screen 3,026 ft.
The Texas Co.'s No. 9 State, 2,229 ft. N, 918 ft. E from SE cor. Sec. 13-12s-10w, in 12s-9w ..... Drlg. gumbo 1,196 ft.
The Texas Co.'s No. 10 State, 2,375 ft. N, 584 ft. E, SE cor. Sec. 13-12s-10w, in Twp. 12s-9w ..... Location.
Union Sulphur Co.'s No. 2 Gulf Land (Humble lease), 661 ft. E and 810 ft. N of SW cor., Sec. 12-12s-10w .. Drlg. sand and lime rock 5,920 ft.
Union Sulphur Co.'s No. 1 Gulf land (Pure Oil Co. lease), 1,958 ft. N, 400 ft. W of SE cor., Sec. 11-12s-10w ..... Heaving shale 8,363 ft.
Yount Lee Oil Co.'s No. 11 School land, 2,310 ft. W and 1,606 ft. N, SE cor., Sec. 15-12s-10w ..... Drlg. sand and shale 3,510 ft.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 13-13s-8w, 800 ft. S 66 deg. 42 min. from No. 9 ..... Location.

LEESVILLE—LA FOURCHE PARISH

The Texas Co.'s No. 5 L.L.&E., 2,388 ft. S, 105 ft. E of NW cor. of Sec. 26-21s-22e ..... Drlg. sandy shale 3,212 ft.

ANSE LA BUTTE—ST. MARTIN PARISH

Ratliffe et al's No. 2 Crusel (W.O.), 50 ft. S and 50 ft. W of NE cor. of Sec. 42-9s-2e ..... Drlg. gumbo 1,520 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Great Southern Oil Co.'s No. 1 Schevojsa, 329 ft. N, 78° E of N cor. B. Dottery Sur. ..... Drlg. shale 1,836 ft.
O'Hara Oil & Gas Co.'s No. 1 Neilius, J. C. Cummings Hacienda Sur., 650 ft. N of No. 1 Schroeder in 18-acre tract, north edge Mill Creek ..... Derrick.

BRAZORIA COUNTY

John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 2, Andrew Robinson Sur. ..... Drlg. gumbo 3,112 ft.
J. R. Ingram's No. 2 Levitt, John Peske Sur., 75 ft. NW of No. 1 ..... Cored sandy shale 2,168 ft.
The Texas Company's No. 3 Belcher, Manvel, Harvey N. Little Sur., 1,220 ft. southwesterly and 200 ft. southeasterly out of N cor. of Belcher lease ..... Rigging up.

BURLESON COUNTY

Ball & Knob's No. 2 Polansky, M. B. Lawrence Sur., 359 ft. from E line and 469 ft. from N line of 158-ac. tr. ..... Drlg. 575 ft.
E. M. Bracey et al's No. 1 Bracey, J. Lastly Sur., 880 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 160 acres, thence 180 ft. at right angles in 3-acre tract ..... Drlg. sticky shale 690 ft.
Marek & Son's No. 3 A. Marek, N. McFaddin Sur., 1,068 ft. N and 325 ft. W of SE cor. of tract ..... Standing 2,210 ft.
M. O. & T. Corp.'s No. 1 Rogers ..... Shut down 2,710 ft.
Sampson Oil & Gas Co.'s No. 1 Duckworth & Gilley, 100 ft. from S line and 100 ft. from W line of Blk. 5, P. Singleton Sur. ..... Shut down 2,648 ft.
J. R. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft.; standing.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, I.&G.N. Sur., Sec. 43 ..... Coring sand 4,022 ft.
Smith, Adair et al's No. 1 Barnett, 230 ft. from W line and 330 ft. from S line of Blk. 36, Q. K. Winn Sur. .. Drlg. gumbo 1,515 ft.

FORT BEND COUNTY

Naylor & DeCosta's No. 1 Naylor, 6,350 ft. N, 55 deg. E from SW cor. 653-acre tract in Christman Sur. ..... Drlg. shale 3,605 ft.
Stone & Wyman's No. 1 Beard, H.&T.C. Sur. No. 118, 1,150 ft. from NW line, 1,592 ft. from NE line ..... Sandy shale 1,635 ft.

GALVESTON COUNTY

H. H. Stevenson's No. 1 Lobit, J. F. Perry and E. M. Austin Sur., 250 ft. N of Dickinson Bayou, and 250 ft. W of E line of E. Lobit 23-ac. tr. ..... Shut down 600 ft.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur. ..... Drlg. sandy shale 1,868 ft.

HARDIN COUNTY

W. R. Alexander et al's No. 1 Southwestern Lbr. Co., 150 varas W of C of E line of Mary K. Sherman Sur.. Spudded and shut down.
Joe E. Proctor's No. 1 Russell & Teagle, 3,650 ft. E and 2,777 ft. N of NW cor. of Wm. W. Young Sur. ..... Drlg. gumbo 1,936 ft.

HARRIS COUNTY

T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... D.S. stuck 547 ft; standing.
Crown-Framer Oil Co.'s No. 1 Woodburn, Genoa, August Whitlock Sur., 200 ft. out of NW cor. of tr. .. Derrick.
Crown-Framer Oil Co.'s No. 2 Woodburn, 1,400 ft. S, 400 ft. E of NW cor. August Whitlock Sur. ..... Cmtd. 10-in. csg. 235 ft; T.D. 239 ft; standing.
John Deering's No. 1 Warren, Hockley T. Snell Sur., 100 ft. due south of The Texas Co.'s No. 3 Warren.. Rig.
H. D. Morse et al's No. 1 Schlveinle, Wm. White Sur., 900 ft. S 80° W of NW cor. of Lienberger 20-ac. tract in Blk. 1 ..... Derrick.
Suma Oil Co.'s (Lucket et al's) No. 1 Wilson & Hunt, Wm. Ritchie Sur., 200 ft. from S line and 500 ft. from W line of 50-acre tract ..... Drlg. sand and shale 1,005 ft.

JASPER COUNTY

Hext Drlg. Co.'s No. 1 Flourney, B. F. Jones Sur., 900 ft. NW of Helmerich & Payne's No. 1 Flourney ..... Shut down 4,350 ft.
Rio Neches Oil Co.'s No. 3-A Boykin, SE cor. of M. Rackie Sur., N of No. 2-B ..... Sand showing oil 695 ft.

JEFFERSON COUNTY

Elam & Pipkin's No. 2 Broussard, John McGaffey Sur., 150 ft. due E of No. 1 ..... No report.

LIBERTY COUNTY

Bain-Rheubotham's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E, 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... Shut down 700 ft.

MATAGORDA COUNTY

Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 3,000 ft. E from SW cor. of Seth Ingram Sur. ..... Drlg. shale and lime 2,614 ft.
Shepherd's Mott Salt Dome Oil Co.'s No. 1 Hawkins, Shepherd's Mott, 5,268 ft. from N line and 1,320 ft. from E line of B. McCarthy Sur. ..... Drlg. gumbo 720 ft.
United North & South Oil Co.'s No. 1 Stoddard, J. C. Keller Sur., 150 ft. W and 545 ft. N of SE cor. Blk. 53, Buckeye Townsite ..... Failed to flow when swabbed 7,831 ft.; pulling screen.

MONTGOMERY COUNTY

Alpha Oil Co.'s No. 1 South Tex. Dev. Co., center of Blk. 47, in southeast Alex McCown Sur. ..... Drlg. gumbo 1,114 ft.
Ed Falvey et al's No. 1 McComb, L. Smith Sur., 330 ft. from N and W lines of 160-ac. tract ..... Derrick.
Gohlson Bros. and Rycade Oil Corp.'s No. 1 Drought, 3,340 ft. along N line of Kronkrite Sur., from NE cor., thence 250 ft. S at right angles ..... Drlg. shale 3,522 ft.
Heep Oil Corp.'s No. 1 Bent, D. W. Collins Sur., 330 ft. from S line in center east and west of 209-ac. tr.. Drlg. shale 1,310 ft.
Heep Oil Corp.'s No. 1 Cartwright (D.D.), 2,861.6 ft. southerly along W line of John O. Davis Sur. from NE cor. and thence 450 ft. E ..... Rebuilt derrick to kill well to deepen 5,078 ft.
Heep Oil Corp.'s No. 2 Cartwright Sur., John Davis Sur., 330 ft. from S line, 400 ft. from E line of tr... Cmtd. 12½-in. surface csg. 850 ft.
Houston Oil Co.'s No. 1 Hamman, Charles B. Stewart Sur., 450 ft. from N and W line of 282.5-ac. tr. .... Drlg. shale 2,603 ft.
Kraft & Gesieke's No. 1 South Tex. Dev. Co., T.&N.O. Sur., Blk. 9 ..... Drlg. shale 3,847 ft.
Pevehouse Oil Co.'s No. 1 Sealey, Jas. Pevehouse Sur., 1,575 ft. N of N line of Horton & Woodson's 1,562-acre tract and 2,326 ft. E of W line of H.&W. 1,870-acre tract ..... Shut down 3,984 ft.
Plummer & McDaniel's No. 1 South Tex. Dev. Co., Theo. Slade Sur., 330 ft. from S and E lines of 60-ac. lease, in Lot 103 ..... Drlg. gumbo 410 ft.
Rowe & Flowers' No. 1 Varner, R. House Sur., 330 ft. out of NE cor. of 33-ac. tr. ..... Coring shale 3,812 ft.
Rowe & Flowers' No. 1 Alexander, 330 ft. out of SE cor. Lot 20 in the NW A. McCown Sur. ..... Drlg. shale 2,852 ft.
C. C. Steinberger et al's No. 1 Steinberger, John Davis Sur., 450 ft. from N and W lines of the 250-ac. tract.. Drlg. gumbo 820 ft.
Strake Oil Corp.'s No. 3 South Tex. Dev. Co., 2,475 ft. from W line and 790 ft. from S line of Theo. Slade Sur. ..... Cmtd. 10-in. csg. 855 ft.

NEWTON COUNTY

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line and 500 ft. from N line of tract ..... Drlg. shale 825 ft.
Sun Oil Co.'s No. 1 Peevey Moore Lbr. Co., 2,145 ft. from S line and 1,225 ft. from W line of F. Stoevar Sur. No. 4 ..... Moving in.

ORANGE COUNTY

Altex Oil Co.'s (Veteran Oil Co.) No. 1 Reed, A. Nelson Sur. No. 1, 500 ft. from N line and 250 ft. from E line of tract ..... Drlg. sand 4,801 ft.

POLK COUNTY

Collins & Plummer's No. 2 Collins, Augustine Viesca Sur., 310 ft. S of No. 1 in F. E. Chase 25-ac. tract... Drlg. shale 4,815 ft.
Tony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... Rig.

REFUGIO COUNTY

Gulf Prod. Co.'s No. 1 J. O'Connor, C.E.P.I.&M. Sur., 1,200 ft. from S line and 1,500 varas from E line of tract ..... Drlg. gumbo 1,475 ft.
Humble Oil & Ref. Co.'s No. 1 O'Connor (D.D.), 6,013 ft. S from NE cor. along SE line of Lon T. Rios Sur., thence 7,375 ft. W at right angles in John Keating Sur. ..... Drlg. shale 5,017 ft.
Humble Oil & Ref. Co.'s No. 2 O'Connor, John Keating Sur., 12,625 ft. N of S line at right angles and 3,158 ft. W of E line at right angles ..... Drlg. hard sandy shale 5,314 ft.

SAN JACINTO COUNTY

Seven Wells Oil Co.'s No. 1 Foster Lumber Co., 3,000 varas from the E line and 2,000 varas from the S line of H. Alsbury Sur. ..... Dry and abnd. 5,125 ft.

TRINITY COUNTY

Joseph M. Weaver's No. 1 Thompson, 150 ft. out of NE cor. of L&G.N. Sur., No. 47 ..... S.D. 3,556 ft.

VICTORIA COUNTY

Bunte et al's No. 2 Keeran, Martin DeLeon Sur., 200 ft. E of No. 1 ..... Coring salt water sand 5,498 ft.
Cullen & West's No. 1 Keeran ranch, Martin DeLeon Sur., 460 ft. from S line, 450 ft. from W line of tr. .. Coring sand 5,340 ft.
Houston Oil Co.'s No. 1-A McFaddin, 300 ft. from NE line, 240 ft. from SE line of I.R.R. Sur. No. 20 ..... Fishing 20 fourbles drill stem; T.D. 5,292 ft.
Humble Oil & Ref. Co.'s No. 1 Pete Rydolph, John Kemper Sur., 2,617 ft. from E line and 1,013 ft. from W line of lease ..... Drlg. shale 1,047 ft.
The Texas Company's No. 4 McFaddin, 86 deg. E. 1,728½ ft. from NE cor. of Andrew J. Gray Sur. in John M. Rine Sur. ..... T.D. 2,840 ft.; sidetracked at 1,050 ft. and drlg. sand and boulders 1,073 ft.
Union Oil Co.'s No. 1 Keeran, 4,166 ft. SW along SE line of Gulf Prod. Co.'s 2,500-ac. lease from most easterly cor., thence 1,390 ft. SE at right angles in Martin DeLeon Sur. ..... Drlg. gumbo 2,932 ft.

WALKER COUNTY

W. E. Brown's No. 1 Horshall, 150 ft. out of SE cor. of E. Miller Sur. ..... Location.
Hart Oil Co.'s No. 1 Thompson Lbr. Co., Jose Ortega Sur., 1,265 ft. S, 1,876 ft. W of SW cor. of J. B. Gibson's 71-acre tract ..... Shut down 2,090 ft.
Geo. F. Kerr's No. 1 Smithers Bros., S. Manning Sur. .... Shut down 2,240 ft.

WALLER COUNTY

McDaniel and associates' No. 1 Citizens State Bank, B.B.B.&C. Sur., C of 150-acre tract ..... No report.

WASHINGTON COUNTY

M.O.&T. Corp.'s No. 1 Giddings, S. Young Sur., 200 ft. from S line and 150 ft. from W line of 698-acre tract ..... Derrick.

SOUTH LOUISIANA

ASCENSION PARISH

McElroy Pet. Co.'s No. 2 Lacey, 150 ft. S, 150 ft. W of NE cor of Sec. 29-10s-4e ..... Shut down 4,560 ft.
Rio Bravo Oil Co.'s No. 1 Community Lease, Darrow, 200 ft. from N line and 1,500 ft. E at right angles from SW cor. of Sec. 15-10s-2e ..... Moving in rig.

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W and 156 ft. S of NE cor. of NW of Sec. 33-2s-9w ..... Drlg. surface 100 ft.

CALCASIEU PARISH

Crawford Doyle's No. 1 Johnson, Sec. 32-9s-13w ..... Shut down 875 ft.
Wilfred Lahay's No. 1 Jardell, Sec. 16-10s-12w ..... Shut down 3,650 ft.

CAMERON PARISH

Brownie-Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 50 ft. S of NE cor. E half SE of Sec. 18-12s-12w.. Drlg. shale 6,340 ft.

EVANGELINE PARISH

Emile LeDeau's No. 1 Vidrine, 360 ft. W and 350 ft. S of NE cor. of Sec. 47-3s-2e ..... Shut down 1,420 ft.

IBERIA PARISH

Warrick Oil Co.'s No. 1 Bernard, 912 ft. N and 150 ft. E of SW cor. Sec. 54-12s-7e ..... Standing 2,982 ft.

IBERVILLE PARISH

Standard Oil Co.'s No. 2 Myrtle Grove-Wilbert, Bayou Choctaw, 2,040 ft. N and 600 ft. W of C of Sec. 52-9s-11e ..... No report.

PLAQUEMINES PARISH

Lake Washington-Freeport Sulphur Co.'s No. 1 Cockrell-Moran, Sec. 14-20s-26e, 3,442 ft. E and 46 ft. N of station ..... Stopped flowing; abnd.; T.D. 1,548 ft.

POINTE COUPEE PARISH

Grand Bay Oil & Gas Co.'s No. 1 Moniotte, 10,140 ft. S and 13,450 ft. E of NW cor. Twp. 5s-11 in Sec. 34.. Shut down 310 ft.

TERREBONNE PARISH

Freeport Sulphur Co.'s No. 3 Wurzlow (Bay St. Elaine), 1,132 ft. from W line, 1,530 ft. S of NE cor. of Sec. 17-22s-18e ..... Sulphur test.
The Texas Company's No. 7 State-Lake Pelto, 2,216 ft. N, 104 ft. W of SE cor., Sec. 8-23s-18e ..... Driving piling.
The Texas Company's No. 4 State-Lake Barre (D.D.), 1,900 ft. S and 600 ft. E of NW cor., Sec. 30-21s-20e.. No report.
The Texas Co.'s No. 14 State Lake Barre, 400 ft. S, 850 ft. W, NW cor. Sec. 30-21s-20e, in Sec. 37-21s-19e ..... Lime rock 2,820 ft.
The Texas Co.'s No. 15 State-Lake Barre, 1,500 ft. S, 150 ft. E of NW cor., Sec. 30-21s-19e ..... Building derrick.

VERMILLION PARISH

Pure Oil Co.'s No. 1 Mulvey Irrigation (Gueydan), 1,170.9 ft. from N line and 3,252.5 ft. from W line of Sec. 34-11s-1w ..... Drlg. sticky shale 1,129 ft.

VERNON PARISH

Minerals Division Llano Co.'s No. 1 Llano Del Rio, 543 ft. E and 300 ft. S of NW cor. of NW of Sec. 34-2n-9w ..... Location.

WEST FELICIANA PARISH

Putnam Synd.'s No. 3 Como Plantation, Sec. 51-1s-14w... Shut down 2,449 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 47)

C. J. Webster Oil & Gas Co.'s No. 1 San Antonio Suburban Irrigated Farms, 200 ft. from S and W lines of Farm Lot 2, Blk. 49, in SW Bexar County ..... Rigged up.

BROOKS COUNTY

Ed East's No. 1 A. Garcia, 600 ft. from N and E lines of 2,168-ac. tract in SW part of county ..... T.D. 1,098 ft.; drlg.
M. P. Evans' No. 1 J. M. Martinez, 200 ft. from N and W lines of Blk. 11, Sec. 6, La Encantada Sur. ..... T.D. 600 ft.; drlg.

CALDWELL COUNTY

George Sullivan and Shell Petroleum Corp.'s No. 1 Plinsoll, 2,800 ft. to SW line, 300 ft. to NW line of tract and survey in M. Dennis Sur. ..... T.D. 4,000 ft.; standing.
Kistler, Stivers & Hendrick's No. 1 D. Carter, 400 ft. from NW line of Sur., 300 ft. NE of Creek in L Allen Sur. ..... T.D. 1,485 ft.; standing in chalk.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Stewart Nelson in L&G.N. Sur. No. 43 ..... T.D. 4,021-25 ft.; tested gas.
V. F. Neuhaus et al's No. 1 Mattyles C. Barnett, 330 ft. from W line, 330 ft. from S line of Subd. 26 of Obid K. Winn Sur. ..... T.D. 250 ft.; set surface csg.

DE WITT COUNTY

J. F. Richardson's No. 1 Virginia Taylor, 330 ft. from SE line of tract, 330 ft. NE of Minnehuilla Creek .... T.D. 700 ft.; drlg.
The Texas Co.'s No. 1 John McCrabb, 4,000 ft. from SW line, 1,435 ft. from SE line of 794-ac. lease in James Quinn Sur. ..... T.D. 4,977 ft.; tested dry; drilling deeper.

DUVAL COUNTY

Aztec Oil & Royalty Co.'s No. 1 Peters, 750 ft. from E line, 300 ft. from N line of S 160 ac. of Sur. 322 ..... T.D. 2,000 ft.; S.D.
R. F. Duggan & J. D. Clair's Smith No. 1 Sutherland, 150 ft. from S and E lines of NE NE of Sur. 138..... Location.
Frank Gravis' No. 3 Schallert in Sur. 255 (Palangana salt dome) ..... T.D. 253 ft.; drlg.
Clark & Cowden's No. 1 Sutherland, 450 ft. from W line, 150 ft. from S line of Sur. No. 3 ..... Rigging up.
O. W. Killam's No. 1 Peters, 150 ft. from E line, 450 ft. from N line of SE of Sur. No. 1 ..... T.D. 2,725 ft.; standing.
Plymouth Oil Co.'s No. 1 Parr, 6,250 ft. from W line, 1,925 ft. from S line of San Andres, Garcia grant ... T.D. 2,300 ft.; drlg.
The Texas Co.'s No. 1 Peters, 2,330 ft. from N and W lines of Sur. 162 ..... T.D. 2,607 ft.; tested salt water.
E. R. Thomas' No. 1 Wood-Welder, 1,000 ft. from S and 1,320 ft. from E lines of Sur. 383 ..... T.D. 2,227 ft.; S.D. for water.

GUADALUPE COUNTY

John F. Camp's No. 1 Delaney, 2,572 ft. from S line, 1,515 ft. from W line of Delaney 400-acre tract in Jesus Cantu Sur. ..... Location.

GOLIAD COUNTY

John F. Camp and Stanolind Oil & Gas Co.'s No. 4 Pettus, 1,000 ft. S and 55.5 deg. W of No. 1 Pettus .... T.D. 4,481 ft.; abnd.
Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,200 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,470 ft.; standing.
Humble Oil & Ref. Co.'s No. 1 Fromme, 450 ft. from S line, 150 ft. from W line of lease on Geo. Kersey Sur.. T.D. 4,155 ft.; drlg. shale.
Plymouth Oil Co.'s No. 2 Parks, 400 ft. S of No. 1 Parks in Solomon Parks Sur. ..... T.D. 5,137 ft.; casing on ground.
Neal et al's No. 1 J. M. Pettus, 10,700 ft. to S line, 2,500 ft. to E line of Pedro Trevino Sur. ..... T.D. 4,701 ft.; coring

GONZALES COUNTY

Crowder Oil Co.'s No. 1 Preston, 1,000 ft. from W line, 2,000 ft. from N line of W. W. Pace Sur. ..... T.D. 200 ft.; standing.
Edmiston & Kirby Petroleum Co.'s No. 1 J. W. Ward, Jr., 200 ft. from N and W lines of tract in Dan McKay Sur. ..... T.D. 1,529 ft.; S.D
Johnson & Mattock's No. 1 J. James, 12 miles NE of Gonzales city, 900 varas from E line, 300 ft. from S line of tract in M. A. Williams Sur. ..... T.D. 3,000 ft.; pulled in derrick.
A. J. Nassamer No. 1 M. Raminsky ..... Location.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft.; shut down.
San Roman Oil Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 675 ft.; S.D.
Dayle L. Smith's No. 3 Daskam, SW part of county..... T.D. 1,726 ft.; S.D.

JIM HOGG COUNTY

Clark & Cowden's No. 1 E. Vela, Share 1 El Peyote grant. Rigging up.
D. C. DeWitt's No. 1 Gomez, 1,1.9 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county ..T.D. 1,457 ft.; to drill deeper.
E. J. Hough's No. 1 Hinnant, 150 ft. from S and W lines of Blk. 3, Sur. No. 20 ..... T.D. 2,850 ft.; coring for sand.
Randado Syndicate's No. 1 Randado townsite, Sur. No. 148 ..... T.D. 2,260 ft.; drlg.

JIM WELLS COUNTY

F. A. Lain's No. 1 Vernon Porter, 800 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... Rebuilding derrick.
Mid-States Oil & Gas Co.'s No. 1 Wade, C Blk. 3, Wade ranch, NE part of county ..... Location.
S. J. Sloane's No. 1 W. Wade, 150 ft. SW of cen. of NE line of Lot 6, Blk. C of Wade ranch, C. Blanca Sur... T.D. 2,983 ft.; tested salt water.

KARNES COUNTY

A. E. Edmiston's No. 1 O. L. Cochran, 150 ft. from S line, 500 ft. from E line of farm in D. B. McConnell Sur. ..... T.D. 1,820 ft.; standing.
Nichols Oil Co.'s No. 1 Newberry, 210 ft. S, 60 de. E from Fort Bend Oil Co.'s No. 1 Newberry ..... T.D. 3,300 ft.; S.D.
Pickett et al's No. 1 D. E. Lyons in Victor Blanco Sur.... T.D. 3,422 ft.; drlg sandy shale.

KERR COUNTY

Eastland Oil Co.'s No. 1 Love, 600 ft. E of No. 1 Love in J. Martinez Sur. No. 1,594 ..... T.D. 1,360 ft.; drlg.
Evans & Gant's No. 1 E. Young, A. E. Burg Sur. 28.... T.D. 1,312 ft.; standing.
Verde O. & G. Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923, Hamilton Sur., 4 miles from Center Point; T.D. 200 ft; carried to this depth and abandoned as Herber Oil Co.'s No. 1 J. D. Witt ..... T.D. 110 ft.; standing.

KLEBERG COUNTY

H. Carter et al's No. 1 R. H. Simmons, in Sec. 7, King Sur. No. 3 ..... T.D. 3,205 ft.; standing.

LA SALLE COUNTY

Frank Clark's No. 1 Coleman, 200 ft. from S and E lines of Blk. 15, Sur. No. 514 ..... T.D. 40 ft.; set surface pipe.

LIVE OAK COUNTY

Catlett & O'Neill's No. 1 H. D. Miller, 2,400 ft. from SW line, 6,125 ft. from NW line of Miller ranch in SE part of county ..... T.D. 3,215 ft.; S.D.
J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... T.D. 592 ft.; S.D. for water.

LEE COUNTY

Paton Bros.' No. 1 C. A. Turner, 150 ft. from N line, 375 ft. from E line of tract in David Hudson Sur., 2 miles SE of Tanglewood ..... T.D. 2,200 ft.; lost hole; skidding rig.

McMULLEN COUNTY

V. G. Schimmel's No. 1 Two Rivers Ranch, SE cor. of Sec. 59, 5 miles S of Wentz ..... Set surface csg.

MEDINA COUNTY

James Earle Greenlee's No. 1 J. P. Nixon, 150 ft. S of C of N line of S half of NW of M. Derungs Sur. No. 528 ..... Spudded in.
Robertson Drilling Co.'s No. 1 Little, 2,350 ft. from N line, 1,500 ft. from E line of B. B. Rutledge Sur., southern part of county ..... T.D. 1,700 ft.; drlg.

MILAM COUNTY

H. W. Elliott's No. 1 Marek, 767 ft. from N line, 500 ft. from W line of 160-ac. tr. in B. Wickson Sur. ..... T.D. 3,490 ft.; abnd.; sulphur wtr.
Keyser & Nichols' No. 2 Irwin, 65 ft. from No. 1, Levi Taylor Sur. ..... Set csg. 590 ft.
Keyser & Roberts' No. 3 Ward, 125 ft. NE of No. 2 Ward, in Levi Taylor Sur. ..... T.D. 1,100 ft.; S.D.
Michalk & Clark's No. 1 Johnson, 60 ft. S of No. 1 Johnson on 100-ac. lease in Juan Jose Acosta Sur. .. T.D. 1,300 ft.; fishing.
Keyser & Nichols' No. 1 Irwin, 450 ft. from NW line, 150 ft. from NE line of 126-ac. tract in Levi Taylor Sur. ..... T.D. 200 ft.; lost hole, abnd.

SAN PATRICIO COUNTY

John F. Camp's No. 1 W. W. Bennett, C SW of Sec. 8, Geo. H. Paul Subd., J. J. Welder ranch ..... Location.

STARR COUNTY

H. D. Carpenter's No. 1 Doyno & Chatfield, 175 ft. from S and E lines of Blk. 7, Share 21, Porcions 80-81, Jurisdiction of Camargo, 1 mile E of Rio Grande City. Location.
Coastal O. & G. Co.'s No. 1 Kelsey-Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86.. T.D. 779 ft.; showing gas, setting surface csg.
Frank Dawson's No. 2 R. E. Margo, 632 ft. from N line, 816 ft. from E line of Blk. 5, Share 3-B of Subd. of Porcions 67-72 ..... Rigging up.
W. T. Gilman & Travelers Oil Co.'s No. 1 C. Ramos, 1,170 ft. from SW line, 1,470 ft. from NW lines of Sur. No. 150 ..... Derrick.
H. C. Harter's No. 1 Gonzales, 990 ft. from N line, 1,150 ft. from E line of Share 62-B of Subd. of Porcions 70 and 71, Jurisdiction Mier ..... T.D. 275 ft.; drlg.
Frank LaBorde's No. 1 Juan Marroquin, 1,250 ft. from E line, 1,225 ft. from S line of Share 21 of W two-thirds of Porcion 78 ..... T.D. 620 ft.; standing
Sinclair & Rutherford's No. 1 J. T. Canales, 150 ft. from S and W lines of Share 69 of W half of Porcion 79, Camargo ..... T.D. 420 ft.; drlg.
Smith et al's No. 1 Lopez, 200 ft. from E line, 1,000 ft. from S line of Blk. 20, Share 65 of Porcion 80, Jurisdiction Camargo ..... T.D. 190 ft.; drlg.

Stryalls Oil Corp.'s No. 1 M. E. Salinas, 155 ft. from N and W lines of lease in Porcion 80, Share 38 .... T.D. 2,115 ft.; standing.
Stryals Oil Corp.'s No. 1 H. Garza, 500 ft. from E line, 5,250 ft. from N line of Share 26, Partition of Porciones 67-72 .... Location.
Strayhorn Oil Co.'s No. 1 Caffarelli, Porcion 10, 150 ft. from N and E lines of Share 19-A .... Spudded in.
Stryalls No. Corp.'s No. 1 Margo, 150 ft. from N and E lines of Share 27 of Subd. of Porciones 80 and 81, Jurisdiction of Camargo .... T.D. 210 ft.; standing.
R. B. Suttle's No. 1 Guerra, 2,000 ft. to N line, 270 ft. to W line of Porcion 110 .... T.D. 810 ft.; standing.
E. L. Williams' No. 1 L. G. Madrigal, 150 ft. from N and W lines of Share 5-A of Porcion 72 of Jurisdiction of Mier .... T.D. 332 ft.; drlg.

TRAVIS COUNTY

C. R. Franklin et al's No. 1 J. Wilson, 160 ft. from N and W lines of farm in A. Alexander Sur. .... T.D. 1,210 ft.; S.D.
Fritz Fuchs' No. 1 Swedish, 2,350 ft. from NE line, 750 ft. from NW line of Thomas Smith Sur. .... T.D. 900 ft.; S.D.
Ray & Orth's No. 1 Lundgren, 550 ft. from N line, 150 ft. from W line of 133-ac. tr. in L. Kimbro Sur. .... T.D. 550 ft.; fishing.

WEBB COUNTY

Blair & Livingston's No. 1 J. M. Garcia, 150 ft. from N and E lines of NE NW of Sur. 1,100 .... T.D. 1,100 ft.; drlg.
Phillips Rosenberg's No. 1 Green, 245 ft. from S line, 450 ft. from E line of Sur. No. 233 .... T.D. 2,542 ft.; standing.
Phillips Rosenberg's No. 1 Laurel, 291 ft. from E and N lines of Blk. 10, Sur. 271 .... T.D. 3,450 ft.; abnd.
Thompkins et al's No. 1 Ortiz, 200 ft. from E line, 2,000 ft. from N line of Sur. No. 1,808 .... T.D. 850 ft.; standing.

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tr. in B. Manlove Sur. .... T.D. 400 ft.; S.D.
McNeill & Matthews' No. 1 Bachmayer, 300 ft. from E line, 150 ft. from S line of C. C. Browning Sur. .... T.D. 2,000 ft.; standing.
G. B. Peterman's No. 1 Guentzel, 300 ft. from SE line, 467 ft. from SW line of tract in H. Cooks Sur. .... T.D. 2,565 ft.; abnd.

WILSON COUNTY

A. M. Blume's No. 1-A Nicholson, 105 ft. N, 27 deg. E of No. 1 Johnson .... Location.
Sun Oil Co.'s No. 1 Tudyk, 650 ft. from W line, 500 ft. from S line of 157-ac. tract in John Turner Sur. .... T.D. 2,712 ft.; drlg.

ZAPATA COUNTY

Ballard & Mercer's No. 1 Flores, 500 ft. from NE line, 550 ft. from SE line of Blk. 27, Porcion 37 .... T.D. 2,505 ft.; drlg. lime.
Joe Cullinan's No. 1 E. Gutierrez, 1,992 ft. from NE line, 2,303 ft. from SE line of Charco de la India grant .... T.D. 1,271 ft.; drlg.
Donohoo et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700 ac. of Share A, Charco Redondo grant .... Set 1 joint of surface casing.
Hunt & Polk's No. 1 H. Ramires, 7,075 ft. N of S cor. and 2,918 ft. from W line of Share A of Villa grant. .... T.D. 820 ft.; standing
T. J. Murray's No. 1 Haynes, 2,915 ft. from NE line, 8,619 ft. from NW line of Comitas grant .... T.D. 1,200 ft.; standing.
F. J. Ossenbeck's No. 1 Adelfonso Ramerix, 600 ft. W of Zapata-Roma highway, 150 ft. from SE line of Porcion 18 .... Location.
H. L. Sargent et al's No. 1 Antonio Gutierrez heirs, 922 ft from W line, 472 ft. from S line of Tract 2, Blk. 5, Nixon Subd., Porcion 10, San Ignacio Borrego grant .... T.D. 762 ft.; drlg.
F. J. Searight's No. 1 F. Munoz, 660 ft. from N line and on line between Blocks 81 and 82 of Porcion 18 .... Rigging up.

Southwest Texas Proven Areas

Week Ending July 2

YOST FIELD—BASTROP COUNTY

Campbell & Tong's No. 8 Yost, 300 ft. SE of No. 7 Yost, A. Garcia Sur. .... T.D. 1,535 ft.; drlg.

NORMANNA POOL—BEE COUNTY

Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks .... Moving in.
The Texas Co.'s No. 1 Scott, E of Normanna Field, 500 ft. N and W lines of lease in Jose Maria Uranga grant .... T.D. 5,038 ft.; abnd.

PETTUS POOL—BEE COUNTY

The Texas Co.'s No. 5 Gremmell, 450 ft. N of No. 1 Gremmel in (south) John Pace Sur. .... T.D. 3,906 ft.; flowing with 120 lbs. pressure.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tr. in A. Manachaca Sur. 51.. C.D. 1,216 ft.; drlg.
E. M. Carl's No. 1 F. Gembler, 160 ft. from N line, 750 ft. from E line of tract in J. Montes Sur. .... T.D. 482 ft.; waiting for rig.
F. H. Eckert & Son's No. 1 Louis Brehm, W offset to No. 3 John J. Brehm .... Location.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodriguez Sur. .... T.D. 2,223 ft.; sidetracking.

DUNLAP POOL—CALDWELL COUNTY

Bob Rose's No. 1-B Walker, 320 ft. from NW line, 150 ft. from NE line of Walker lease, Solomon Seal Sur.. T.D. 1,760 ft.; drilling in.
Cole et al's No. 1 Pierce, 400 ft. from NE line, 445 ft. from NW line of Pierce 100-ac. tract in Solomon Seal Sur. .... Derrick on ground.
Smilock Oil Co.'s No. 1 Dunlap, offsetting Bob Rose's No. 1 Pierce, in Solomon Seal Sur .... T.D. 2,400 ft.; setting csg.
Trinity Drillers, Inc.'s No. 1 Dunlap, N offset to Bob Rose's No. 1 Pierce in Solomon Seal Sur. .... Rigging up.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 C. F. Robertson, 700 ft. from E line, 200 ft. from N line of 100-ac. tract, John A. Neill Sur. .... Derrick.
C. J. Webster Oil & Gas Co.'s No. 1-A McCrory, 75 ft. NW of No. 1 McCrory in John A. Neill Sur. .... T.D. 1,475 ft.; drlg.

COLE POOL—DUVAL COUNTY

Cole Petroleum Co.'s No. 76 Benavides, 1,010 ft. from NE lines, 150 ft. from NW lines of Blk. 8, Sec. 19, Cole Subd. of Mariano Arispe grant .... T.D. 1,200 ft.; drlg.
Cole Pet. Co.'s No. 75 Benavides, 365 ft. from NE line, 150 ft. from NW line, Blk. 6, Sec. 18, Mariana Arispe grant .... T.D. 6,394 ft.; abnd.

GOVERNMENT WELLS—DUVAL COUNTY

A. R. Anderson's No. 1 E. Riley, 150 ft. from N line, 250 ft from S line of SW SW of Sur. No. 44 .... T.D. 2,286 ft.; in sand
Buchanan & Terrell's No. 1 R. T. Ellison, 150 ft. from S and E lines of NE NW Sur. 44 .... Rigging up.
Buchanan & Terrell's No. 2 R. T. Ellison, 510 ft. from E line, 150 ft. from S line of NE NW of Sur. 44 .... Location.
R. F. Byrd's No. 1 R. T. Wright, 150 ft. from N and W lines of Sur. 101 .... Drlg. water well.
H. H. Coffield's No. 1 H. Wendt, 150 ft. from S and E lines of NE of Sur. No. 43 .... T.D. 2,292 ft.; flowed 245 bbls. on quarter-inch choke.
Humble Oil & Refining Co.'s No. 4 White, 2,310 ft. from S line, 1,320 ft. from W line of Sur. 58 .... Rigging up.
Humble Oil & Ref. Co.'s No. 5 Paul White, 1,980 ft. from W line, 990 ft. from S line of Sur. 58 .... T.D. 2,358 ft.; gauged 263 bbls. in 14 hrs.
Magnolia Petroleum Co.'s No. 1 Johnson, 150 ft. from N and W lines of SW of Sur. No. 44 .... T.D. 2,331 ft.; set csg.
Magnolia Petroleum Co.'s No. 2 J. T. Johnson, 150 ft. from S and W lines of NE of Sur. No. 44 .... Location.
Magnolia Petroleum Co.'s No. 2 Wendt, 150 ft. from S and W lines of NW of Sur. No. 44 .... Location.
Petroleum Finance Corp.'s No. 1 C. W. Hahl, 150 ft. from N and W lines of SW Sur. No. 46 .... T.D. 2,275 ft.
Seacord & Putnam's No. 1 Johnson, 150 ft. from S and E lines of NW NW of Sur. 44 .... Location.
Southwest Drilling Co.'s No. 1 R. Wendt, 150 ft. from S and E lines of Sur. No. 43 .... T.D. 2,292 ft.; flowed 35 bbls. an hour on ½-inch choke.
The Texas Company's No. 1 Freer, 150 ft. from N and E lines of Sur. No. 45 .... Location.
Whisenant, Trenchard & French Oil Corp.'s No. 1 C. W. Hahl, 230 ft. from S line, 660 ft. from E line of SW SW of Sur. 44 .... Location.
Windsor Oil Co.'s No. 1 L. L. Cummings, 450 ft. from S line, 150 ft. from W line of E half of NW of Sur. 44 .... Location.

SARNOSA FIELD—DUVAL COUNTY

John F. Camp's No. 2 Weil, 1,200 ft. N, 18 deg. W of No. 1 Weil in Sur. No. 570 .... Rigging up.
Hynes & Nessly's No. 1 Weil, 2,560 ft. from NE line, 200 ft. from NW line of Sur. 130 .... Spudded in.
E. R. Thomas' No. 1 Duval County Ranch Co., 150 ft. from NW and NE lines of E of S of Sur. 576 .... Location.
Smith & Capps' No. 3 Duval County Ranch Co., 2,210 ft. from NW line, 150 ft. from NE line of Sur. 576... Spudded in.

SLICK POOL—GOLIAD COUNTY

T. B. Slick estate's No. 2 Allen, 1,660 ft. from NE line, 330 ft. from NW line of tr. in Obid Marshall Sur. .. T.D. 4,243 ft.; swabbing.

DARST CREEK—GUADALUPE COUNTY

Humble Oil & Ref. Co.'s No. 5-C Sue Denman, 525 ft. from E line, 600 ft. N of No. 4-C, Wm. Arrington Sur. .... T.D. 2,515 ft.; going on pump.
Humble Oil & Refining Co.'s No. 6-C Sue Denman, 938 ft. NE of No. 5-C Sue Denman and 400 ft. W offset to Sun Oil Co.'s No. 2 Dowdy in Jacob C. Darst Sur... T.D. 2,320 ft.; drlg.
Sun Oil Co.'s No. 2 Dowdy, 500 ft. from N line of tract 700 ft. from W line of tract and survey in Jacob C Darst Sur. .... T.D. 2,516 ft.; going on pump.

LOBO FIELD—LIVE OAK COUNTY

John F. Camp et al's No. 1 Reagan, 3,100 ft. from E line, 21,200 ft. from N line of L. F. Reagan tract .... T.D. 100 ft.; set surface csg.

JACOB POOL McMULLEN COUNTY

Jacob, Buzzini & Pickett's No. 1-B Jacob, Sec. 15 G.H.&H. Ry. Sur. .... T.D. 1,065 ft.; set csg. 1,054 ft.
Jacob, Buzzini & Pickett's No. 1-C Jacob, Sec. 47, J. Pointevant Sur. .... Temp. abnd. loc.
Jacob, Buzzini & Pickett No. A-4 Jacob, 880 ft. N 25 deg. W of No. A-3 or 330 ft. from E line, 500 ft. from N line of Sur. 10 .... T.D. 952 ft.; set csg.; W.O.C.
Longhorn Oil Co. and American Gas Co.'s No. 1 Lark, 2,790 ft. from N line, 1,150 ft. from W line of Lark tract, E. W. B. Scrugham Sur. .... Moving in.

ADAMS FIELD—MEDINA COUNTY

Yantis Oil Co.'s No. 1 Adams, 420 ft. from S line, 2,000 ft. from W line of F. Mumme Sur. .... Location.

KING FIELD—NUECES COUNTY

John F. Camp and Stanolind Oil & Gas Co.'s No. 2 King, 660 ft. from S and E lines of Sec. 23 of King Subd... T.D. 4,024 ft.; 14 ft. in sand; tested gas.

SAXET FIELD—NUECES COUNTY

Gulf Coast Oil Co.'s No. 1 Perkins and LeGasse, 330 ft. from N and E lines of 245-ac. tr., Sec. 26, Shepard Subd. .... T.D. 4,566 ft.; wild gusser, dropped from report.
Gulf Coast Oil Co.'s No. 1 Bessie Elder, offset to No. 1 Perkins & Gasse, a wild gasser .... T.D. 2,740 ft.; in sand; setting csg
Gulf Coast Oil Co.'s No. 2 Perkins & Gasse, 650 ft. from N line, 990 ft. from E line of Sec. 26 of Shepherd farm lots .... Location.
Gulf Coast Oil Co.'s No. 2 Perkins & Gasse, 650 ft. from N line, 990 ft. from E line of Sec. 26 .... Location.
V. B. Hillegeist's No. 1 McGregor, 150 ft. from W line, 330 ft. from S line of Sec. 311 .... T.D. 4,875 ft.; setting csg
McCarthy, Rogers, Nix et al's No. 1 Isencee, 151 ft. from W line, 172 ft. from N line of Blk 12 .... Location.
McCarthy-Rogers-Nix et al's No. 1 Isencee, 151 ft. from W line, 172 ft. from N line of Blk. 12 of Shepherd farm lots .... Location.
Saxet Oil Co.'s No. 1 Walton, 200 ft. from S line, 629 ft. from W line of 256-acre tract .... Location.
Saxet Oil Co.'s No. 2 Walton, 200 ft. from S line, 629 ft. from W line, N offset to Sun-Kepley Donegan .... Location.

ARANSAS POOL—SAN PATRICIO COUNTY

Atlantic Oil Prod. Co.'s No. 4 Welder, 1,900 ft. S, 30 deg. E of No. 3 Welder .... T.D. 4,000 ft.; temp. S.D.

WHITE POINT—SAN PATRICIO COUNTY

United Prod. Co.'s No. 3 Cage .... T.D. 4,925 ft.; comp. gasser.

LOS OLMOS POOL—STARR COUNTY

Coastal Oil & Gas Co.'s No. 1 Kelsey-Bass, 697 ft. from W line, 878 ft. from N line of NW NW Sec. 5, Subd. of Porciones 75, 76 and 77 .... T.D. 250 ft.; standing.
Kirk Cornell's No. 2 Kelsey-Bass, 450 ft. from N and W lines of Sec. 8, Porcions 75, 76, 77 .... Location.
H. H. Davis' No. 6 Kelsey Bass, 20 ft. from E line, 600 ft. from N line of SW NW Section 6, Subd. of Porciones 75, 76, 77 .... Spudded in.
Day & Co.'s No. 1 Kelsey Bass, 150 ft. from S line, 400 ft. from W line of W 20 acres of NE NW of Sec. 6, Subd. of Porcions 75, 76, 77 .... T.D. 600 ft.; standing.
Griffin et al's No. 1 Bass, 150 ft. from N and W lines of NW NW Sur. 11, Subd. Porcions 75, 76, 77 .... T.D. 1,100 ft.; drlg.
Hooks & Weaver's No. 7 Kelsey-Bass, 150 ft. from S line, 600 ft. from E line of E 20 acres of NE SW of Sec. 6, Subd. of Porciones 75, 76, 77, Jurisdiction Camargo .... T.D. 445 ft.; drlg.
M. A. Landrum's No. 2 Kelsey-Bass, 519 ft. from S line, 150 ft. from E line of Sur. 6, Porcions 75, 76 and 77 .... Location.
M. A. Landrum's No. 1 A. K. Bass, Sec. 6, 150 ft. to S and E lines of lease .... Location.
Los Olmos Oil & Gas Co.'s No. 16 Kelsey Bass, 300 ft. from N line, 450 ft. from E line of NE NW of Sec. 7, of Subd. of Porciones 75, 76, 77, Jurisdiction Camargo .... Location.
Los Olmos Oil & Gas Co.'s No. 17 Kelsey-Bass, 150 ft. from S and W lines, NW SE of Sec. 7, Subd. of Porciones 75, 76, 77, Jurisdiction Camargo .... T.D. 465 ft.; in sand.
Los Olmos Oil & Gas Co.'s No. 18 Kelsey-Bass, 300 ft. from N and W lines of SE SW of Sec. 6, Subd. of Porciones 75, 76, 77, Jurisdiction Camargo .... T.D. 420 ft.; comp. 35 bbls.
Los Olmos Oil & Gas Co.'s No. 19 Kelsey-Bass, 450 ft. from N line, 150 ft. from E line of NE NW Sec. 7, Porcions 75, 76, 77, Jurisdiction of Camargo .... T.D. 450 ft.; set csg.; W.O.C
Tom C. Patton's No. 1 Kelsey-Bass, 150 ft. to W line, 150 ft. to S line of 20-ac. tract in NW NE of Subd. 8 of Porcions 75, 76 and 77 .... T.D. 1,050 ft.; abnd.
Quien Sabe Oil Co.'s No. 1 Kelsey Bass, 300 ft. from N line, 750 ft. from W line of NE SW Section 8, Porciones 75, 76, 77 .... Location.
Rio O. & G. Co.'s No. 3 Kelsey-Bass, No. 6 Subd., Porcions 75, 76 and 77 .... T.D. 569 ft.; abnd.
San Marcos Development Co.'s No. 10 Ivy, 100 ft. from E line, 1,200 ft. from N line of Share 8 of Subd. of W two-thirds of Porcion 75, Camargo .... T.D. 300 ft.; drlg.
Sinclair & Rutherford's No. 1 Kelsey Bass, 150 ft. from S and W lines of SE NW Sec. 6, Subd. of Porcions 75, 76, 77 .... T.D. 420 ft.; drlg.
Snyder et al's No. 1 Powe, 600 ft. from E line, 300 ft. from S line of Share 8, Subd. of N two-thirds of Porcion 75, Camargo .... T.D. 400 ft.; drlg.

RIO GRANDE CITY POOL—STARR COUNTY

Coastal Oil & Gas Co.'s No. 1 Olivarez, 150 ft. from NE and SE lines of easternmost corner of Share 35, Porcion 80, Camargo ..... Derrick.
Gulf Coast Oil Co.'s No. 1 Frank Doyno, 150 ft. N of C of S line of Blk. 4, Share 77-A, Por. 81, Camargo.. T.D. 1,449 ft.; setting csg.
T. J. Heard's No. 1 Block, 150 ft. from S and E lines of Lot 4, Tract 28-A of Por. 80, Jurisdiction Camargo... T.D. 2,000 ft.; drlg.
R. E. Johnson's No. 1 F. H. de Izaguirre, 150 ft. from E line, 450 ft. from N line of Share 36-A, Porcions 80-81, Jurisdiction of Camargo ..... Location.
King Pin Oil Co.'s No. 1 T. C. Lewis, 207 ft. from E line, 111 ft. from S line of Share 22, Porcion 80, Jurisdiction of Camargo ..... Derrick.
Sioux Oil Co.'s No. 3 Goodrich, 150 ft. from N line, 1,150 ft. from W line of Blk. 1, Tract 5, Porcions 80-81, Jurisdiction of Camargo ..... T.D. 1,400 ft.; cored 14 ft. of sand; to drill in.
Tarver & Nance's No. 1 Seabury et al, 400 ft. from W line, 150 ft. from N line of Tract 21, in Porcion 79, Camargo ..... T.D. 1,300 ft.; drlg.
Traylor-Munday-Flowers' No. 1 Frank Doyno, 150 ft. from S and W lines of Blk. 7, Share 76-A, Porcions 80 and 81 ..... Location.

AVIATOR POOL—WEBB COUNTY

Frank Clark's No. 1 Puig Bros., 750 ft. from E line, 150 ft. from S line of Straight-S 160-acre tract, Albercas grant ..... T.D. 1,760 ft.; coring.

CHAPMAN POOL—WILLIAMSON COUNTY

Westbrook Oil Co.'s No. 8-B Lawrence, 340 ft. NE of No. 7-B, and 150 ft. from SE line of 27-ac. tr. in S. Miller Sur. ..... T.D. 1,611 ft.; comp. 15 bbls.
R. A. Westbrook's No. 9 Simmons, 550 ft. along SE line of J. J. Sides' 10-ac. tr. from SW cor., thence 360 ft. SW at right angles and between Nos. 7 and 8 ..... T.D. 1,838 ft.; abnd.
Westbrook Oil Co.'s No. 9-B Lawrence, 340 ft. NE of No. 8-B and 150 ft. from SE line of 27-ac. tr. in S. Miller Sur. ..... Location.

ESCOBAS POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 28 Gutierrez, 480 ft. from NE line, 1,027 ft. from SE line of Share 4, Comitas grant ..... T.D. 1,475 ft.; comp. 150 bbls.
Allied Oil & Gas Co.'s No. 29 Gutierrez, 150 ft. from NE lines, 925 ft. from SE lines of Share 4, Comitas grant ..... T.D. 1,473 ft.; set csg.; W.O.C.
Allied Oil & Gas Co.'s No. 30 Gutierrez, 800 ft. from NE line, 900 ft. from SE line of Share 4, Comitas grant ..... T.D. 1,472 ft.; set csg.; waiting on cement.
H. H. Coffield's No. 2 Santiago Bustamente, 150 ft. from SE and NE lines of Coffield 80-ac. lease, Share 34, Comitas grant ..... T.D. 1,465 ft.; abnd.
H. H. Coffield's No. 3 Santiago Bustamente ,150 ft. from SE line, 150 ft. from NE line of Coffield 80-ac., Share 34, Comitas grant ..... Location.
McGinley Oil Corp., No. 1 G. T. Montemayor, 150 ft. from N and W lines of Blk. 6, Sur. 64 ..... Location.
McGinley Corp.'s No. 2 Bustamente, 1,065 ft. from NE line, 150 ft. from NW line of 105.7-acre tract in Share 35, Comitas grant ..... Spudded in.
O. W. Killam's No. 10 Medina, 153 ft. from SE line, 440 ft. from SW line of Share 34, Comitas grant .... T.D. 1,460 ft.; comp. 10,000,000 ft. gas.
Shankle, Newton Oil & Gas Co.'s No. 17 F. Cuellar, 510 ft. from SE line, 675 ft. from SW line of Blk. 14, Sur. 65 ..... T.D. 500 ft.; drlg.
Shankle-Newton's No. 17 F. Cuellar, 510 ft. from SE line, 675 ft. from SW line of Blk. 14, Sur. No. 65 .... T.D. 500 ft.; drlg.
S.R.C. Oil Co.'s No. 6-E Trevino, 600 ft. from SW line, 450 ft. from NW line of Block 12, Sur. 65 ..... T.D. 1,200 ft.; drlg.
S. A. Thompson's No. 1 Garza Est., 450 ft. from SE line, 159 ft. from NE line of Blk. 20, Douglas Subd., Comitas grant ..... T.D. 1,468 ft.; abnd.
The Texas Company's No. 9 Measles, 500 ft. from SE line, 125 ft. from SW line of Cerrito Blanco grant .. T.D. 1,195 ft.; drlg.

CHARCO REDONDO POOL—ZAPATA COUNTY

Bob & Richey's No. 29 Martinez, 810 ft. from SW line, 360 ft. from SE line of Blk. 24, W. R. Duke Subd., Charco Redondo grant ..... Location.
L. G. Smith's No. 1 J. M. Martinez, 350 ft. from NE and SE lines of Blk. 18, Share B, Duke's Subd. of Charco Redondo grant ..... Location.
Windsor Oil Co.'s No. 1 Martinez, in NE of Blk. 15, of W. R. Duke Subd., Charco Redondo grant ..... Spudded in.

MARTINEZ FIELD—ZAPATA COUNTY

Newton Drilling Co.'s No. 2 Garza, 225 ft. from N line, 1,000 ft. from W line of Blk. 4, Sur. 161 ..... Rigging up.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 58)

SABINE PARISH

Adams & Roberson's No. 1 Peterson, 405 ft. N, 200 ft. W, SE cor. NE NE, Sec. 35-8-13 ..... Set 10-in. at 100 ft.
J. H. Askew's No. 1 Sabine Lbr. Co., NE NE, Sec. 9-7-13. Tested dry 2,430; S.D. to work over.
R. W. Boulding's No. 1 Williams, Sec. 17-7-10, 200 ft. S and E, NW cor. SW NE ..... S.D. for wtr. 1,400 ft.
Broderick & Calvert's No. 1 Costello, Sec. 2-7-14, 375 ft. S, 150 ft. W, NE cor. SE NW ..... Dry and abnd. 2,415 ft.
R. E. Brooke's No. 1 A. Gray, 330 ft. N and W, SE cor. SW NE, Sec. 35-8-13 ..... Location.
F. M. Burke's No. 1 Gray, 454 ft. N, 265 ft. W, SE cor. SW SW, Sec. 3-7-13 ..... Set 10-in. at 100 ft.
Bob Chew's No. 1 O. Gray, 330 ft. N and E, SW cor. SW NW, Sec. 35-8-13 ..... Location.
Cliff Oil Co.'s No. 1-A Martinez School, 730 ft. N, 105 ft. W, SE cor. NE SE, Sec. 4-7-13 ..... Drlg. 1,000 ft.
W. M. Coates' No. 1 Gray, 330 ft. N and W, SE cor. SW, Sec. 2-7-13 ..... Location.
W. M. Coates' No. 2 Gray, 330 ft. S and W, NE cor. SE SW, Sec. 2-7-13 ..... Location.
Coates Pet. Co.'s No. 2 Stille, 330 ft. N and E, SW cor. SE SW, Sec. 35-8-11 ..... Drlg. 2,420 ft.
Coates Pet. Co.'s No. 3 Stille, 330 ft. N and E, SW cor., Sec. 35-8-13 ..... Location.
The Coming Oil Co.'s No. 1 Cobb, 330 ft. N and E, SW cor., Sec. 14-7-11 ..... Derrick.
Craig et al's No. 1 Travis, Sec. 13-7-11, 200 ft. S and E, NW cor. SE NW ..... W.O.; S.R. 2,580 ft.
Crescent Drlg. Co.'s No. 1 Williams, 370 ft. E, 330 ft. S, NW cor. N½ SW, Sec. 21-7-12 ..... Location.
Crescent Drlg. Co.'s No. 2 Williams, 330 ft. S and W, NE cor. SE NW, Sec. 21-7-12 ..... Location.
Mark Curtis et al's No. 1 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SE, Sec. 35-8-13 ..... Derrick.
R. E. Davidson's No. 1 Davis, 600 ft. S, 125 ft. E, NW cor., Sec. 34-7-11 ..... Derrick.
William DeSota's No. 1 Mooney, 350 ft. S, 395 ft. E, NW cor., Sec. 25-8-13 ..... Derrick.
B. A. Ferrell's No. 1 Haley, Sec. 6-7-12, 300 ft. S and E, NW cor. NW SW ..... Testing 2,150 ft.
Harry Flinchbaugh's No. 1 Sepulbedo, 330 ft. N and E, SW cor. SE NE, Sec. 4-7-13 ..... Set 6-in. 2,090 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 300 ft. W, NE cor. NW NW, Sec. 10-8-13 ..... Coring lime 5,945 ft.
R. L. Gay, tr.'s No. 11 Bowman-Hicks, 330 ft. N and W, SE cor. NE NE, Sec. 14-7-14 ..... Cmtd. back to 2,316 ft.
J. I. Hall's No. 1 Williams, SE NW, Sec. 3-7-10 ..... T.A. 2,831 ft.
Vick Hammond's No. 1 Esernack, SE cor. NW SW, Sec. 3-7-13 ..... Location.
W. N. Hankins' No. 1 Tilley, 200 ft. E, 30 ft. S, NW cor. SE SE, Sec. 36-8-13 ..... Derrick.
Howard et al's No. 1 Williams, 300 ft. N and E, SW cor. SE NW, Sec. 13-7-11 ..... Set 6-in. 2,432 ft.
J. B. Huges' No. 1 Stille, 283 ft. N, 383 ft. W, SE cor. SE SW, Sec. 36-8-11 ..... Set 10-in. 102 ft.; drlg. 1,100 ft.
Ab Jones' No. 1 Garcia, 200 ft. S and W, NE cor. NW SE, Sec. 4-7-13 ..... Rigging up.
G. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE, Sec. 34-8-11 ..... Location.
J. J. Keen, tr.'s No. 1 Belton (no check), Sec. 31-9-13... Tested dry 1,743 ft.
A. D. King, tr.'s No. 1 Davis, 170 ft. N, 410 ft. E, SW cor. NW NE, Sec. 29-7-11 ..... Location.
A. D. King, tr.'s No. 1 Germain, Sec. 7-7-10, 330 ft. E, 518 ft. N, SW cor. NE NE ..... Tested dry 2,617 ft.
A. D. King, tr.'s No. 1 T. L. Andries, 200 ft. S, 300 ft. E, NW cor. SE SE, Sec. 15-7-11 ..... Derrick.
A. D. King, tr.'s No. 1 J. J. Andries, 140 ft. S, 240 ft. W, NE cor. SE SW, Sec. 15-7-11 ..... S.D. repairing rig 2,585 ft.
S. A. Lane et al's No. 1 DeKeyser, 233 ft. E, 330 ft. S, NW cor. NE, Sec. 23-7-11 ..... S.D. 2,650 ft.
Geo. LeGrand's No. 1 McGough, Sec. 3-8-10 ..... S.D. 1,450 ft.
Hill Myers' No. 1 Garcia, 200 ft. N and W, SE cor. SW NW, Sec. 4-7-13 ..... S.D. for water 1,200 ft.
E. F. Neely's No. 1 Rains, 660 ft. N, 100 ft. W, SE cor., SW NW, Sec. 14-7-11 ..... W.O.S.R. 2,541 ft.
C. D. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 660 ft. W, SE cor. Sec. ..... W.O.S.R. 2,509 ft.
C. D. Neff, tr.'s No. 1 Peterson, 200 ft. N and E, SW cor. NW NW, Sec. 36-8-13 ..... Set 6-in. 2,046 ft.
Palmer & Smitherman's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and E, NW cor. NE SE ..... Location.
Palmer & Smitherman's No. 2 La. Long Leaf Lbr. Co., 330 ft. S and W, NE cor. SE, Sec. 12-7-11 ..... Location.
Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE, Sec. 8-8-10 ..... Derrick.
J. H. Reeves' No. 1 Sabine State Bank, NE SW, Sec. 28-8-11 ..... Coring 2,254 ft.
Otis A. Robinson's No. 1 S. S. Martinez, 355 ft. S, 330 ft. W, NE cor. SE NE, Sec. 4-7-13 ..... Derrick.
Bill Rowe's No. 1 Sepulbedo, 530 ft. N, 200 ft. E, SW cor. SE SE, Sec. 4-7-13 ..... Rigging up.
Sculley & Black's No. 3 Lafitte, 1,400 ft. S, 133 ft. W, NE cor. NW NW, Sec. 13-7-11 ..... Location.
Service Drlg. & Royalties Co.'s No. 2-A Gardner, 330 ft. N, 300 ft. E, SW cor. NE NE, Sec. 12-7-11 ..... Tested dry 2,630 ft.
Skully & Beach's No. 2 Lafitte, 149 ft. S, 228 ft. E, NW cor., Sec. 13-7-11 ..... Set 10-in. 100 ft.
H. R. Smith et al's No. 1 La. Long Leaf Lbr. Co., Sec. 12-7-11, 330 ft. S and W, NE cor. NW SW ..... Location.
W. W. Smith et al's No. 1 Sepulbedo, 230 ft. N, 250 ft. W, SE cor., Sec. 4-7-13 ..... Set 10-in. 100 ft.
Sneed & Sneed's No. 1 Pearce, 200 ft. N, 215 ft. E, SW cor. NE SW, Sec. 35-8-13 ..... Set 10-in. 2,016 ft.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE, Sec. 13-9-11 ..... Drlg. 1,850 ft.
Southland Drlg. Co.'s No. 2 F. Martinez, 330 ft. N and W, SE cor. W½ SE, Sec. 34-8-13 ..... Drlg. 2,245 ft.
State Prod. Co., Inc.'s No. 1 Davis, Sec. 17-7-10, 150 ft. N and E, SW cor. SW NW ..... Tested dry 3,018 ft.
State Prod. Co., Inc.'s No. 1-B Davis, 200 ft. N and E, SW cor., Sec. 17-7-10 ..... Derrick.
Supreme Oil Co.'s No. 1 Pruitt, 330 ft. N and E, SW cor. SE SW, Sec. 30-8-11 ..... Rigging up.
B. E. Taylor's No. 1 Gay, 232 ft. S, 476 ft. E, NW cor. SE SW, Sec. 36-8-13 ..... Location.
B. E. Taylor's No. 1 Wooley, 330 ft. N and E, SW cor. SE SW, Sec. 36-8-13 ..... Location.
A. F. Tarver's No. 3 Cutrer, Sec. 12-7-11, 1,120 ft. E, 200 ft. N, SW cor. NW ..... W.O.S.R. 2,600 ft.
A. F. Tarver's No. 1 R. Stoker, 1,980 ft. S, 1,320 ft. W, NE cor., Sec. 34-8-10 ..... Coring 2,720 ft.
A. A. Trammell's No. 1 Sepulbedo, 330 ft. N and W, SE cor. NW NE, Sec. 5-7-13 ..... Derrick.
W. C. Turnbow's No. 1 Williams, 200 ft. W C E line SW NW, Sec. 13-7-11 ..... Location.
W. C. Turnbow's No. 2 Williams, 178 ft. S, 200 ft. E NW cor. SW NW, Sec. 13-7-11 ..... Derrick.
Tuffree et al's No. 1 T. L. Andries, N½ NE SE, Sec. 15-7-11 ..... Set 10-in. 100 ft.
C. H. Tuttle's No. 2 Byrd, 338 ft. S, 134 ft. E, NW cor., Sec. 7-7-10 ..... Comp. flowing 3,000 bbls. 2,459 ft.
C. C. Walker's No. 1 Noble-Neely, 330 ft. S and E, NW cor. SW, Sec. 36-8-13 ..... Rigging up.
Williams & Spiers' No. 1 Williams, Sec. 31-8-10, SE cor. SE SW ..... S.D. 2,300 ft.
Wurtsbaugh & Torren's No. 1 Peterson, 330 ft. N and W, SE cor. SW NE, Sec. 26-8-13 ..... Location.

TENSAS PARISH

A. R. Willis et al's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor., Sec. 39-11-12 ..... S.D. 3,545 ft.

VERNON COUNTY

Llano Co-operative Colony's No. 1 fee, NW NE, Sec. 34-2n-9w ..... Drlg. 645 ft.

WINN PARISH

Tex Lloyd's No. 1 Milam, C NW SW, Sec. 28-13-3 ..... Location.

ARKANSAS

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C, NW SE, Sec. 4-20-3 ..... 1,253 ft.

CLEVELAND COUNTY

Crum & Stillwell's No. 1 E. R. Bell, Sec. 10-10s-12 ..... Rigged up and S.D.

DALLAS COUNTY

J. H. James, tr.'s No. 1 Fordyce Lbr. Co., 200 ft. S, 200 ft. E, NW cor. SE, Sec. 11-9-15 ..... S.D. 2,575 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW ..... S.D. 2,205 ft.

HOT SPRINGS COUNTY

Star Oil Co.'s No. 1 Cunningham, 285 ft. S, 285 ft. W, NE cor., Sec. 11-5-16 ..... S.D. 1,340 ft.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW, Sec. 5-8-7 ..... S.D. 2,800 ft.

LITTLE RIVER COUNTY

Harrell et al's No. 1 Taffee, 32 ft. W, 630 ft. E, 330 ft. S, SW cor. W NW, Sec. 25-12s-32w ..... Derrick.

MILLER COUNTY

C. E. Litchfield's No. 1 Hervey, 525 ft. S, 350 ft. W, NE cor. NE NW, Sec. 2-15-26 ..... T.A. 2,885 ft.
Fitzwater et al's No. 1 Beck, Sec. 33-15-26 ..... Set 6-in. 2,919 ft.
W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor., Sec. 11-20-27 ..... S.D; W.O. 2,600 ft.

OUACHITA COUNTY

Copenhaven et al's No. 2 Berg, C SE SE, Sec. 13-16-17.. W.O.S.R. 2,208 ft.
McLean et al's No. 1 L. D. Neely, Sec. 23-15-16, 200 ft. N and W, SE cor. NE SW ..... S.D. 102 ft.
Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Section 36-12-18 ..... Rigging up.

PIKE COUNTY

E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE, Sec. 31-8-24 ..... S.D.; W.O. 1,030 ft.

A. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor., Sec. 13-9-23 ..... Rigging up on new hole.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW, Sec. 2-4s-6w ..... Partly rigged up and S.D.

SCOTT COUNTY

Waldron O. & G. Co.'s No. 1 White, NE cor. SW NW, Sec. 17-3n-29 ..... S.D. 1,860 ft.

SEVIER COUNTY

Tristate Oil Co.'s No. 1 Grimble, Sec. 34-5-32, S½ SW ... S.D. 950 ft.

ST. FRANCIS COUNTY

Field & Jones' No. 1 F. M. White, Sec. 1-4n-3e, SW cor. NW ..... Drlg. 3,114 ft.

E. R. Henderson's No. 1 Britton, Sec. 1-4-1e, 1,000 ft. S and E NW cor. NE NW ..... Drlg. 751 ft.

UNION COUNTY

Cox et al's No. 1 Goodwin, 360 ft. S, 180 ft. W, NE cor. SW SW, Sec. 2-16-16 ..... Derrick.

E. H. Helms' No. 1 C. H. Murphy, NE cor. NW NE, Sec. 31-16-14 ..... S.D. 2,875 ft.

Wilson & Chapman's No. 1 King, Sec. 3-18-13, 330 ft. N and E, SW cor. NE NE ..... Derrick.

Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE, Sec. 3-18-13 ..... S.D. 1,678 ft.

WASHINGTON COUNTY

(Cable tools)

A. B. Chase and Ed Rogers' No. 1 Cunningham, 125 ft. S, 300 ft. W, NE cor. SW NE, Sec. 14-15-32 ..... Drlg. 1,725 ft.

C. H. Willoughby's No. 1 Jones, Sec. 34-16-30 ..... Drlg. 1,870 ft.

YELL COUNTY

(Cable tools)

Tegmeier & Lockett's No. 1 Falcon, Sec. 26-7-21 ..... Abd. 5,710 ft.

EAST TEXAS

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.

Lanford et al's No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 1,792 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Lattimer Sur. ..... S.D. 2,860 ft.

C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.

John C. Rogers' No. 1 I. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 86 ac. in K. E. Welborn Sur. .... S.D. 2,280 ft.

John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor., Wm. Davis Sur. ..... S.D. 960 ft.

HARRISON COUNTY

Lloyd Oil Corp.'s No. 1 E. S. Timmons, 150 ft. from N line to 250 ft. from E line of 105-ac. tr., Findley Sur. ..... S.D. 4,195 ft.

M. E. Nash et al's No. 1 Henderson, G. L. Bledsoe Sur... S.D. 85 ft.

Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. ..... Derrick.

Triangle Drlg. Co.'s No. 1 Platt, 1,125 ft. W, 1,995 ft. N, SE cor. F. C. Barker Sur. ..... Location.

MARION COUNTY

M. M. Howard's No. 1 Hussey, Chas. Lockhart Sur. ..... S.D. 2,493 ft.

Bausch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... T.A. 3,996 ft.

Geo. Hinderman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E most easterly W line, Alexander Albright Sur. ..... S.D. 2,380 ft.

Purcell et al's No. 1 Coker, M. Reed Sur. ..... S.D. 1,957 ft.

PANOLA COUNTY

Moses & Wallace's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur... S.D. for D.S. 740 ft.

J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr. in James Hanks Sur. ..... S.D. 3,055 ft.

SHELBY COUNTY

K. H. Francis' No. 1 John Mims, Mary Smith Sur. ..... Rigged up on new hole.

General Minerals Co.'s No. 2-B Holt, Matthew Moore Sur. S.D. 3,951 ft.

General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... Reaming 2,740 ft.

Henry Mauilding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur. ..... Rigged up on new hole.

McRoby et al's No. 1 Windham, Wm. Leach Sur., on Windham 296-ac. tr. ..... S.D. 3,393 ft.

Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. N and 200 ft. W from SE cor. 42-a. tr. of J. Burleson Sur... Location.

Ridgeway et al's No. 1 Polley, Dominguez Gonsales Sur., 3,180 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr. ..... Set 8-in. 1,937 ft; T.D. 1,949 ft.

Sedberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. ..... S.D.; W.O. 1,768 ft.

Western World's No. 1 Foster, Billingsby-Jeremiah Bowlin Sur. ..... S.D. 2,940 ft.

Wray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W SE cor. 152-ac. tr. in D. T. F. Yordt Sur. ..... Fishing D.S. 2,033 ft.

Louisiana-Arkansas Proven Areas

NORTH LOUISIANA

CADDO PARISH—PINE ISLAND

Company, well, farm name, section and block—	Remarks:
Simplex Oil Co.'s No. 1 Youree-Glassell, 500 ft. N and E, C, Sec. 13-20-15	Comp. pumping 90 bbls. 2,272 ft.

OUACHITA PARISH

Carbon Con.'s No. 7 Guthrie, Sec. 50-20n-4e, 5,263 ft. N, 7,475 ft. W of cors. of Secs. 25, 26 and 49, in Sec. 50 ..... Location.

J. J. Potts, trustee's No. 2 Robertson-Reid, 531 ft. N, 825 ft. E, SW of Sec. 11-18-4e ..... Set 8-in. 815 ft.; set 6-in. 2,162 ft.

SABINE PARISH—ZWOLLE

Baird Bros.' No. 1 S. Martinez, 132 ft. E, 476 ft. S, NW cor. NE SW, Sec. 2-7-13 ..... Cmtd. back to 2,405 ft.

W. M. Coates' No. 1 LaRoux, 330 ft. N and E, SW cor. SE, Sec. 36-8-13 ..... Dry and abnd. 2,500 ft.

W. M. Coates' No. 1 Nulton, 224 ft. E, 330 ft. S, NW cor. SW NW, Sec. 1-7-13 ..... Dry and abnd. 2,515 ft.

Coates Pet. Co.'s No. 2 S. S. Martinez, 347 ft. S, 330 ft. E, NW cor., NE SE, Sec. 3-7-13 ..... Set 6-in. 2,112 ft.

Dengall O. & G. Co.'s No. 1-F Nulton, 330 ft. S and E, NW cor. SW NW, Sec. 2-7-13 ..... Derrick.

Dengall O. & G. Co.'s No. 1-G Nulton, 350 ft. N, 330 ft. W, SE cor. NE NE, Sec. 2-7-13 ..... W.O.S.R. 2,419 ft.

Dengall O. & G. Co.'s No. 2-G Nulton, 330 ft. N and E, SW cor. NE NE, Sec. 2-7-13 ..... Location.

Edwards & Hubien's No. 1 Martinez, 355 ft. E, 541 ft. N SW cor., Sec. 2-7-13 ..... Location.

J. R. Grandstaff's No. 1 Johnson, S½ SW SW, Sec. 2-7-11 Drlg. 2,110 ft.

D. D. Holcomb's No. 2 Quayhagiew, 149 ft. N, 200 ft. E SW cor. SE SE, Sec. 11-7-11 ..... Location.

H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW, Sec. 14-7-11 ..... Derrick pattern.

W. F. Lacey's No. 1 Hughes, 330 ft. S and E, NW cor. E½, Sec. 10-7-11 ..... Location.

W. F. Lacey's No. 2 Hughes, 40 ft. N, 106 ft. W, SE cor. NW SW, Sec. 11-7-11 ..... Fishing for D.S. 2,382 ft.

Lanier et al's No. 2 Newton, 400 ft. N, 330 ft. W, SE cor. NW, Sec. 3-7-13 ..... Rigging up.

Lion Oil Ref. Co.'s No. 1 LaRoux, 348 ft. N, 330 ft. E, SW cor. S½ NE SE, Sec. 3-7-13 ..... Drlg. 1,950 ft.

Loring Oil Co.'s No. 12 Bowman-Hicks, 1,320 ft. S, 275 ft. E, NW cor. SW NW, Sec. 15-7-12 ..... Waiting on baroid 5,272 ft.

Loring Oil Co.'s No. 1 Martinez, 330 ft. N and W SE cor. NW NE, Sec. 3-7-13 ..... Location.

H. D. McDonald's No. 1 T. L. Andrin, 180 ft. E, 150 ft. N, SW cor. NW SE, Sec. 15-7-11 ..... Location.

Frank Meiat's No. 1 Davis, 175 ft. W, 225 ft. S, NE cor., Sec. 2-7-11 ..... Rigging up.

Ben Merritt, tr.'s No. 1 Nulton, 400 ft. S and W, NE cor. SW NE, Sec. 3-7-13 ..... Comp. flowing 750 bbls. 2,390 ft.

C. D. Neff, tr.'s No. 1 Stoker, 212 ft. N and W, SE cor. NE SW, Sec. 10-7-11 ..... Derrick.

Pelican Natural Gas Co.'s No. 14 La. Long Leaf Lbr. Co., 330 ft. S and E, NW cor. NW NE, Sec. 8-7-11.... Set 6-in. 2,320 ft.

T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. NW SE, Sec. 6-7-12 ..... Derrick.

F. G. Reid's No. 1-B McNeely, 400 ft. S, 110 ft. W, NE cor. NE NW, Sec. 14-7-11 ..... W.O.S.R. 2,508 ft.

F. G. Reid's No. 4-A McNeely, 200 ft. S and W, NE cor. NW NE, Sec. 14-7-11 ..... Derrick.

C. T. Ruffian's No. 1 Lilley, 300 ft. S and W, NE cor. NW, Sec. 8-7-11 ..... Comp. pumping 75 bbls. 2,366 ft.

Howard Russell's No. 1 Porter, 480 ft. N, 230 ft. W, SE cor., Sec. 7-7-11 ..... Drlg. 1,875 ft.

Sabine Prod. Co.'s No. 3 Pearce, Sec. 10-7-11, 330 ft. S and E, NW cor. SE NW ..... S.D.; W.O. 2,699 ft.

Self & Kissick's No. 2 Moran, C W½ SE NE, Sec. 1-7-11.. Derrick.

Ben F. Smith's No. 1 fee, 330 ft. S, 400 ft. E, NW cor. Sec. 4-7-11 ..... Set 6-in. 2,234 ft.

W. S. Smith, trustee's No. 1 Hamilton, 330 ft. N and E, SW cor. NE NE, Sec. 32-8-11 ..... Derrick.

F. E. Stancil's No. 1 Pouder, 273 ft. S, 397 ft. E, NW cor. NE SE, Sec. 10-7-11 ..... Tested dry 2,593 ft.

F. E. Stancil's No. 2 Pouder, 805 ft. N, 283 ft. E, SW cor. SE SE, Sec. 10-7-11 ..... Location.

The Texas Company's No. 2 Nabours, 576 ft. W, 237 ft. S NE cor. SE, Sec. 2-7-11 ..... Derrick.

E. M. Thompson's No. 1 Travis, 350 ft. N and E, SW cor. SE SW, Sec. 12-7-11 ..... Set 4½-in. 2,457 ft.

A. A. Trammell's No. 1 Hill, 330 ft. S and W, NE cor. SE SE, Sec. 32-8-11 ..... Derrick.

UNION PARISH

Interstate Nat. Gas Co.'s No. 3 Steele, 660 ft. S and E, NW cor. NE, Sec. 26-20-3e ..... Comp. 4,500,000 ft. gas 2,154 ft.

Southern Carbon Co.'s No. 60 fee, 36 ft. W, 482 ft. S, NE cor. NW, Sec. 20-20-4e ..... Location.

ARKANSAS

UNION COUNTY—URBANA

Marine Oil Co.'s No. 1 Winn est., 330 ft. S and E, NE cor. S½ NW, Sec. 11-18-13 ..... T.A. 3,536 ft.

Marine Oil Co.'s No. 2-E Thompson, 330 ft. N, 330 ft. E, SW cor. NE NE, Sec. 10-18-13 ..... Location.

Wilson & Chapman's No. 1-B Hadley, Sec. 3-18-13, 330 ft. S and W, NE cor. SE NW ..... T.A. 3,545 ft.

Wilson & Chapman's No. 2 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE ..... S.D. 1,730 ft.

EAST TEXAS

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. ..... S.D. 3,359 ft.

United Prod. Corp.'s No. 17 Steele, 1,320 ft. N, 660 ft. W, SE cor. C. D. Steele lse., in B. C. Jordan Sur. .... Location.

MISSISSIPPI

HINDS COUNTY

Joe A. Baker et al's No. 1 Hudson, 380 ft. W, 700 ft. S, NE cor. NW NE, Sec. 11-5n-1e ..... Set 10-in. 765 ft.

Henslee et al's No. 1 Warner, 200 ft. S and E NW cor. NE SE, Sec. 14-5n-1e ..... Set 10-in. 786 ft.; drlg. 1,675 ft.

McGuire et al's No. 1 Spring Lake, Sec. 11-5n-1e, 350 ft. N, 450 ft. W, from center of Sec. ..... T.A. 2,487 ft.

RANKIN COUNTY

James Alexader, tr.'s No. 2 Fitzhugh, 550 ft. diagonally SE, 425 ft. S, NW cor. NW NE, Sec. 1-5n-1e ..... Comp. 44,800,000 ft. gas 2,366 ft.

Meredith-Smith et al's No. 3 Strawder, 400 ft. S, 750 ft. W, NE cor., Sec. 12-5n-1e ..... Drlg. 260 ft.

Muse-Muse & Love's No. 1 Bradley, 300 ft. W, 400 ft. N, SE cor. SW, Sec. 11-5n-1e ..... Comp. 35,000,000 ft. gas 2,451 ft.

Wildcat Operations in Mississippi

CLARKE COUNTY

Company, well, farm name, section and block—	Remarks:
F. X. Gowans et al's No. 1 Elfring, SE NE, Sec. 13-1n-14e.	S.D. 104 ft.

HINDS COUNTY

Atkins et al's No. 1 Crane Lawrence, Sec. 23-6n-1e, 300 ft. E, 132 ft. N, SW cor. NE SE ..... Arranging to set 5½-in. 2,485 ft.

Miss.-Minn. Oil Co.'s No. 1 Edwards Land Co., Sec. 23-6n-4w, 1,200 ft. N and E from center of Sec. ..... S.D. 3,050 ft. (corrected).

LAMAR COUNTY

Stauffer & Kouri's No. 1 Bond, SE NE, Sec. 13-2n-14w.. Drlg. 1,800 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec. ..... Drlg. rock 1,875 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 22-15s-17w ..... Set 10-in. 579 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE, Sec. 25-4n-11e ..... S.D. 840 ft.

NOXUBEE COUNTY

Thompson & Donohue's No. 1 Donohue, Sec. 25-16n-17e.. S.D. 1,735 ft.

RANKIN COUNTY

James Alexander, tr.'s No. 1 Holmes, 445 ft. E, 275 ft. N, SW cor. NW, Sec. 31-6n-2e ..... Rigging up.

Ferguson Fuller et al's No. 1 Ivey, 120 ft. W and S NE cor. NW, Sec. 13-5n-1e ..... Drlg. 540 ft.

Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e. Derrick.

Orr et al's No. 1 Hanna, Sec. 14-5n-1e, 500 ft. E, 250 ft. S, NW cor. SW ..... Junked and abnd. 2,480 ft.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9 ..... S.D. 750 ft.

WARREN COUNTY

Eagle Bend O. & G. Co.'s No. 1 Kiger, SW cor. SW SE, Sec. 9-18-2 ..... S.D. 2,607 ft.

Wildcat Operations in Alabama

CLARKE COUNTY

Company, well, farm name, section and block—	Remarks:
Tidal Oil Co. et al's No. 1 Hobson, Sec. 32-6n-3e	Drlg. 4,330 ft.

LAMAR COUNTY

(Cable tools)

DeSoto O. & G. Corp.'s No. 1 Gardner, NW NW, Sec. 22-15s-16w ..... Drlg. 2,590 ft.

MOBILE COUNTY

Ohio Oil Co.'s No. 1 James Bethel, 330 ft. N and E, 3,300 ft. E of NW cor. SW SE, Sec. 34-3s-2w ..... Began June 22; drlg. 150 ft.

J. C. Prine et al's No. 1 M.&O.R.R., Sec. 33-3s-4w ..... Set 12½-in. 240 ft.; drlg. 800 ft.

WASHINGTON COUNTY

South Alabama O. & G. Co.'s No. 1 Wilson, Sec. 36-7n-1w. Rigging up.

MARKET RECORD OF OIL SECURITIES

With the oil import tariff in effect only a few weeks, the price structure of the domestic, for both crude and products, has firmed up materially, strengthening the earning position of the industry as a whole and centering attention on the many attractive "buys" in the oil group on the Stock Exchange and Curb.

The general public thus far has been slow to recognize the vastly improved earnings outlook for the oils and with excessive taxes hampering the operations of professional traders the market thus far has failed to gain any real impetus.

Investment trusts and statistical organizations, however, are delving into the statistical position of the oils in an extensive manner, presaging probable early widespread support of many of the leading issues.

Higher prices for refined products in principal refining centers, it is indicated, have definitely taken the refining and marketing branch of the industry out of the red and into the black, and this improvement is expected to be fully reflected in third quarter earning statements. While the market position during the second quarter, just ended, left much to be desired, preliminary estimates indicate that some units will make surprisingly good reports for that quarter.

With Mid-Continent market conditions shaping toward the likelihood of an increase of 25 cents per barrel in crude oil quotations, the earnings outlook of major units is more favorable than for many months past.

Twenty Representative Stocks

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange and New York Curb based on closing quotations for Wednesday, was as follows:

Dec. 23	12.06	Mar. 30	13.85
Dec. 30	12.31	Apr. 6	12.12
Jan. 6	12.69	Apr. 13	11.31
Jan. 13	13.63	Apr. 20	12.11
Jan. 20	13.14	Apr. 27	12.46
Jan. 27	12.79	May 4	11.72
Feb. 3	13.19	May 11	13.23
Feb. 10	12.02	May 18	12.57
Feb. 17	13.28	May 25	12.44
Feb. 24	12.45	June 1	11.34
Mar. 2	13.61	June 8	11.39
Mar. 9	14.33	June 15	11.86
Mar. 16	13.00	June 22	11.41
Mar. 23	13.02	June 29	12.09

Rio Grande

Rio Grande Oil Co. reports for the March quarter profit of $83,770 after depreciation, depletion, etc., but before Federal taxes. This compares with net profit of $60,691, equal to 5 cents a share on 1,236,270 no-par shares of capital stock, in the first quarter of 1931.

Current assets as of March 31, 1932, were $4,721,410 and current liabilities were $2,940,655, comparing with $9,421,000 and $5,600,000, respectively, on the same date last year.

Devonian Oil

Devonian Oil Co. has resumed the payment of dividends on the $10 par common stock by declaring a 10-cent distribution, payable July 20 to stock of record July 1. The last previous dividend, 15 cents per share, was paid on January 2, 1931.

Royal Dutch

Royal Dutch Petroleum Co. has declared a dividend of 6 per cent payable July 6.

Steaua Romana

Steaua Romana, S. A., one of the principal Rumanian oil companies, reports for 1931 gross profit of lei 533,000,000, against lei 957,000,000 in 1930. After operating expenses, taxes and depreciation, the balance sheet shows loss of lei 222,000,000 for the year, as compared with earnings of lei 40,316,000 for 1930.

Deutsche Erdol

Deutsche Erdol Aktiengesellschaft, German oil company, reports for 1931 net profits of 4,710,000 marks, as compared with net of 5,550,000 in 1930. The company's dividend rate on the ordinary shares has been reduced from 5 to 4 per cent.

Mountain & Gulf

Mountain & Gulf Oil Co. reports for 1931 net loss of $12,311 after expenses, taxes, depreciation and depletion. This compares with earnings in 1930 of $234,053 after expenses, but before depreciation and depletion.

Maracaibo

Maracaibo Oil Exploration Co. and subsidiaries in their annual report, as of December 31, 1931, show total assets of $3,526,476, comparing with $4,371,963 at the close of 1930. Surplus was reduced to $621,351 from $1,471,163 and cash holdings dropped from $368,551 to $203,348.

Salt Creek

Salt Creek Consolidated Oil Co. reports earnings of $166,700 for 1931 before depreciation and depletion, compared with $564,784 before depreciation, depletion, and taxes, in 1930.

New Bradford Oil

New Bradford Oil Co. reports for the year ended December 31, 1931, consolidated net loss of $327,945 after expenses, depreciation, depletion, etc. The company's balance sheet as of December 31 follows: Assets, oil lands and leases, $15,598,112; reserve for depletion, $8,693,

Independent Oils on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended June 25)

1932 High	1932 Low	Week ended June 25 Sales	Week ended June 25 High	Week ended June 25 Low	Close June 29	Stocks		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
⅝	¼	100	¼	¼	..	American Maracaibo	(sh)	700,000	N.P.	....	.....	8⅝	1⅛	4½	½	1¾	¼
2¾	⅜	800	1⅛	⅜	..	Arkansas Natural Gas	(sh)	4,084,225	N.P.	....	.....	26	3¾	16¾	4⅝	6½	1⅛
2⅝	½	1,000	⅞	¾	⅝	Arkansas Natural Gas "A"	(sh)	3,522,521	N.P.	....	.....	24¾	6½	16⅝	4⅝	6¾	1⅛
5½	2⅜	No sales ..	..	..	..	Arkansas Natural Gas pfd.	(sh)	2,193,000	$10	....	4- 1-32	9	4	8⅜	6¼	7	3⅞
9¾	7	No sales ..	..	..	..	British American Oil Corp.	(sh)	2,622,642	N.P.	20cQ	7- 2-32	62	7⅞	23	13⅜	16⅞	6¼
⅝	⅛	200	⅛	⅛	⅛	Carib Syndicate		$131,250	25c	....	.....	4⅞	1	2¾	⅝	2⅜	⅛
6⅞	1¼	36,300	2⅜	2	2	Cities Service	(sh)	36,418,721	N.P.	30cA§	6- 1-32	68½	20	44¼	13	20¾	5
53⅜	10	900	14⅞	12½	12⅝	Cities Service pfd.	(sh)	1,125,931	N.P.	50cM	6- 1-31	98¾	84	93⅞	78¼	84¾	35⅝
⅛	⅛	No sales ..	..	..	..	Colombia Syndicate		3,250,000	N.P.	....	.....	..	..	21	3⅜	7⅛	1
1⅞	½	300	⅝	⅝	⅝	Columbia Oil & Gasoline v.t.c.	(sh)	$2,000,000	$1	....	.....	2	½	¾	⅛	½	⅛
⅝	¼	No sales ..	..	..	..	Colon Oil	(sh)	2,200,000	N.P.	....	.....	15	3⅞	8¼	1⅛	3⅛	¼
1⅜	1	200	1¼	1¼	..	Consolidated Royalty Oil Co.		$5,527,880	$10	5cQ	4-25-32	11½	2½	5⅞	2	2¾	1
1	⅛	No sales ..	..	..	..	Cosden Oil	(sh)	323,950	N.P.	....	.....	135	42	74¾	1¼	3¾	⅝
2½	1⅝	No sales ..	..	..	..	Darby Petroleum	(sh)	609,696	N.P.	....	10-15-30	26	6½	21¾	4¼	5	1⅜
2⅛	1	No sales ..	..	..	..	Derby Oil & Refining	(sh)	500,000	N.P.	....	.. ..	11	2	11	2	6	1½
24½	10½	25	16½	16½	..	Derby Oil & Refining pfd.		48,500	N.P.	....	.....	44	20¾	60	30	40⅛	25
35⅞	23	300	24	24	25¾	Gulf Oil Corp.	(sh)	4,504,921	$25	....	10- 1-31	209	115	166⅞	58½	75½	25⅝
4½	2¾	No sales ..	..	..	..	Indian Terr. Illum. Oil "B"	(sh)	7,090,037	N.P.	....	.....	..	..	53½	12⅝	16⅞	5
¼	⅛	200	⅛	⅛	⅛	Intercontinental Petroleum		$5,682,000	$5	....	.....	2⅞	⅜	1¾	⅜	⅝	⅛
⅝	⅜	200	⅜	⅜	..	Kirby Petroleum	(sh)	750,000	N.P.	....	.....	3⅝	1¼	3	⅞	1⅞	¼
½	⅛	100	⅛	⅛	..	Leonard Oil & Development		$50,000,000	$25	....	.....	14⅞	2½	5	¾	2	½
⅞	½	No sales ..	..	..	..	La. Land & Exp.	(sh)	3,000,000	N.P.	....	.....	6½	1	4¾	½	1½	¼
2⅜	⅞	No sales ..	..	..	..	Lion Oil & Refining	(sh)	250,000	N.P.	....	10-27-30	38⅞	18	29	4⅞	6¾	1½
9¼	3⅝	800	3⅞	3⅝	..	Lone Star Gas	(sh)	5,000,000	N.P.	16cQ‡	6-30-32	67⅞	28	55⅞	19⅝	25	5½
⅛	⅛	1,000	⅛	⅛	..	Magdalena Syndicate	(sh)	850,000	$1	....	.....	1¼	½	½	⅛	½	⅛
6⅛	3¾	No sales ..	..	..	..	Margay Oil Corp.		160,000	N.P.	25cQ	4-11-32	38½	14	16	3	5	1⅞
5¼	2	300	2	2	..	Memphis Natural Gas	(sh)	920,000	N.P.	15cQ	4-15-32	24	8⅛	22¼	7½	12⅛	4½
2	1½	500	1⅝	1½	..	Mexico-Ohio Oil Co.		500,000	N.P.	....	.....	6⅜	2¼	7½	1¾	4⅞	1½
⅛	⅛	No sales ..	..	..	..	Mountain & Gulf		$4,000,000	$1	....	4-15-31	1½	½	¾	⅜	½	⅛
3¼	2⅛	1,600	3⅛	3	3	Mountain Producers		$1,682,182	$10	20cQ	4- 1-32	22⅞	7	12⅛	3¾	5⅞	2
13½	8	1,800	10½	10	10¼	National Fuel Gas	(sh)	3,810,183	N.P.	25cQ	4-15-32	43⅞	23	41⅜	19⅜	26½	9⅜
¾	⅜	No sales ..	..	..	..	New Bradford Oil		$7,224,186	$5	....	4-15-31	5	2½	3½	1⅛	1½	½
⅞	⅜	No sales ..	..	..	..	New Mexico and Arizona		$1,000,000	$1	....	.....	9⅜	2¼	7¼	1½	3	⅜
1	⅝	No sales ..	..	..	..	North Central Texas	(sh)	262,446	$5	....	9- 2-30	18½	6⅛	11¼	2⅛	3¼	⅝
⅜	⅛	2,700	⅛	⅛	..	North European Oil	(sh)	1,372,391	N.P.	....	.....	..	..	6¼	⅝	2⅛	⅛
6¼	3	200	3⅛	3	3	Pacific Western Oil	(sh)	1,000,000	N.P.	....	.....	26⅝	12⅛	19½	5½	15	2⅛
⅛	⅛	100	⅛	⅛	..	Pandem	(sh)	1,291,403	N.P.	....	.....	3½	½	2½	¼	½	⅛
½	⅛	1,300	⅛	⅛	..	Pantapec Oil	(sh)	1,595,500	N.P.	....	.....	10½	1⅞	4⅜	⅞	2	⅜
7¾	6	500	6⅛	6⅛	..	Plymouth Oil	(sh)	1,050,000	$5	25cQ	7- 1-32	37	22	27½	16¼	19	6
½	⅛	No sales ..	..	..	..	Reiter-Foster	(sh)	388,584	N.P.	....	12- 2-29	8½	1⅛	5⅜	1	3⅛	¼
1	⅜	No sales ..	..	..	..	Richfield Oil pfd. x.w.	(sh)	399,950	$25	....	.....	31½	22	23½	6½	11	¼
1¼	⅜	100	⅞	⅞	..	Ryan Consolidated	(sh)	296,931	N.P.	....	.....	11	2	8⅝	2	3	⅜
½	⅛	100	⅛	⅛	..	Salt Creek Consolidated	(sh)	1,286,300	$10	....	4- 1-31	5⅞	1⅞	2½	½	1⅜	⅛
4⅛	2⅞	100	3½	3½	3½	Salt Creek Producers	(sh)	1,496,859	$10	25c	5- 2-32	25⅞	9	15¾	5¼	7¾	2⅜
½	¼	100	¼	¼	⅛	Sunray Oil	(sh)	1,163,185	$5	....	4-15-31	12	5⅝	10	2	5¼	¼
6⅞	4½	1,200	5	4¾	..	Texon Oil & Land	(sh)	936,036	N.P.	25c	6-30-32	23	7⅛	19½	8	12⅞	2½
½	⅛	100	⅛	⅛	..	Venezuelan Petroleum	(sh)	755,090	$5	....	2-15-30	6½	1¾	4½	⅜	1⅞	¼
2	1⅛	No sales ..	..	..	..	Woodley Petroleum		$500,000	$1	....	3-31-29	9½	2	5	½	3½	1⅛
⅝	⅛	1,300	½	⅜	..	Y Oil & Gas		100,000	N.P.	....	.....	2⅞	½	2½	⅝	2¼	⅛

*Ex-dividend. ‡Payable in stock. §Paid in lieu of regular cash dividend of 2 per cent.

967; lease and other field equipment, $12,730,989; reserve for depreciation, $11,554,213; stocks of other companies, $538,921; deferred assets, $156,171; cash, $301,387; government and other bonds (market value, $1,224,565) $1,620,293; accounts and notes receivable, etc., $116,476; materials and supplies, $168,724; total assets $10,972,892.

Liabilities: Capital stock (par $5), $7,224,185; deferred liabilities, $15,062; reserve for taxes and contingencies, $239,544; minority interests, $2,273,529; surplus, $1,131,206; current liabilities, $88,364; total liabilities, $10,972,892.

Indian Refining

Indian Refining Co. and subsidiaries report for the year ended December 31, 1931, net loss of $3,130,986 after interest, depreciation, taxes and other charges. This compares with net loss of $3,035,866 in the preceding year.

Tide Water

Tide Water Oil Co. reports for the first quarter of 1932 net profit of $8,503 after depreciation, depletion, taxes, minority interest, etc., compared with net loss of $1,145,344 in the corresponding quarter last year. First quarter earnings this year were equal to 4 cents a share on 199,446 shares of 5 per cent preferred.

Consolidated Royalty

Consolidated Royalty Oil Corp. reports for 1931 net earnings of $107,779 before depreciation and depletion, compared with profit of $241,080 in 1930.

Standard Oil Stocks on New York Curb

Quotations Compiled by Francis, Bro. & Co., Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended June 25)

1932 High	1932 Low	Week ended June 25 Sales	Week ended June 25 High	Week ended June 25 Low	Close June 29	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
6¼	6	No sales	..	..	..	Borne Scrymser		$1,000,000	$25	....	10-15-30	46½	25	25	11¼	16	6
35	18	300	23¾	18	..	Buckeye Pipe Line		$10,000,000	$50	$1Q	6-15-32	74½	55	69	39⅞	56	30
90	53	200	74	67	..	Chesebrough Mfg.		$3,000,000	$25	$1Q‡	6-30-32	210	130	184⅞	104¼	129½	75
2½	1⅜	6,100	2¼	2⅛	2⅛	Creole Petroleum	(sh)	5,977,872	N.P.	....	.....	11¾	5⅜	7⅞	3	3⅞	1⅝
35	18	50	22	22	..	Eureka Pipe Line		$5,000,000	$100	$1Q	8- 1-32	70½	40	54¾	26	36	19
49	35⅝	200	37½	37⅜	37¼	Humble Oil & Refining		$74,103,300	$25	50cQ	7- 1-32	128	74⅛	119	57¼	72	44¼
9½	6¼	3,700	7	6⅜	..	Imperial Oil of Canada	(sh)	26,557,496	N.P.	12½cQ	3- 1-32	41	22	30	15	18¼	7⅜
7½	2⅞	No sales	..	..	..	Indiana Pipe Line (new)		$3,000,000	$10	25cQ	2-15-32	41⅞	26	41	14½	21⅛	5½
10⅝	8	1,600	8⅞	8⅝	..	International Petroleum	(sh)	14,247,088	N.P.	25cQ	3-15-32	30⅜	15	24	11⅜	15½	7⅝
10½	6	No sales	..	..	6⅛	National Transit		$6,362,500	$12.50	25cQ	6-15-32	25½	10⅛	22⅜	11½	17½	5
4	2¾	100	2¾	2¾	2¾	New York Transit		$500,000	$5	10cQ	4-15-32	17½	10	21⅜	10⅛	14½	5⅞
4¾	3⅛	100	3½	3½	..	Northern Pipe Line		$1,200,000	$10	25c	1- 2-32	63	41	54	26¼	35½	20
6⅜	4	No sales	..	..	..	Penn Mex Fuel		$10,000,000	$25	50c	5-25-32	44½	20	32	12	15½	5½
14½	9⅝	No sales	..	..	..	South Penn Oil		$30,000,000	$25	25cQ	6-30-32	60¼	35⅛	45⅞	16⅛	23⅞	9¼
10	5⅛	300	5⅜	5⅛	..	Southern Pipe Line		$1,000,000	$10	35cQ	6- 1-32	22½	13	20⅞	8⅝	17	7
37	27	No sales	..	..	..	Southwest Pennsylvania Pipe Line		$1,750,000	$50	$1Q	7- 1-32	70	60	64	32	42½	25
19¼	13⅛	20,100	18¾	17¾	18⅛	Standard Oil of Indiana		$424,914,895	$25	25cQ	6-15-32	63	45	59⅞	30	38½	13⅛
15⅞	8⅞	600	9¾	9½	9¼	Standard Oil of Kentucky		$25,654,516	$10	30cQ	6-30-32	46⅞	29	40½	18⅝	23⅝	12⅛
19	10½	No sales	..	..	..	Standard Oil of Nebraska		$4,770,550	$25	25cQ	6-21-32	50¼	40	48⅞	34⅝	36½	16
28½	15½	100	22	22	19⅞	Standard Oil of Ohio		$18,811,675	$25	62½cQ	4- 1-32	129*	60	108½	43¼	62½	23
2	1⅝	No sales	..	..	..	Swan-Finch Co.	(sh)	34,480	$25	....	1-15-29	18	10	10	4	4½	1

*Ex-dividend. †Unit of trading less than 100 shares. ‡Plus 50 cents extra.

Transactions in Oil Shares on New York Stock Exchange

Quotations Compiled by Francis, Bro. & Co., Members of the New York Stock Exchange and Associate Members of New York Curb, Kennedy Building, Tulsa, Okla.

(Complete record week ended June 25)

1932 High	1932 Low	Week ended June 25 Sales	Week ended June 25 High	Week ended June 25 Low	Close June 29	Stocks—		Outstanding capital	Par value	Div. rate	Payable or last paid	1929 High	1929 Low	1930 High	1930 Low	1931 High	1931 Low
15⅝	12	1,000	14¾	14¼	..	Amerada Corp.	(sh)	922,075	P.N.	50cQ	1-30-32	42⅝	17½	31½	16½	23	11¼
4	¼	No sales	..	..	..	American Republics Corp.	(sh)	209,180	N.P.	....	12-31-30	64¾	12½	37	5¼	12⅜	1¼
9¾	6¾	No sales	..	..	..	Associated Oil		$57,260,300	$25	25cQ	4-15-32	47¼	34½	51	30	31	8¾
12⅞	8⅝	5,600	10½	10	10¼	Atlantic Refining		$67,416,050	$25	25cQ	3-15-32	77⅞	30	51⅜	16⅝	23⅝	8⅝
5⅜	3⅜	4,900	4½	4	4¼	Barnsdall Corp. A		$11,293,895	$5	....	5-11-31	49⅛	20	34	8⅝	14½	4
16⅛	4¼	8,300	7⅛	6⅛	..	Columbia Gas & El.	(sh)	11,684,220	N.P.	25cQ	5-15-32	140	52	87	30⅝	45⅝	11⅝
11	9	1,300	11	9¾	..	Colonial Beacon Oil	(sh)	1,444,970	N.P.	....	12-22-22	32⅞	12½	20¾	8¾	10½	7½
7⅛	4	20,600	5⅛	4¾	5	Consolidated Oil Corp.	(sh)	14,190,000	N.P.	....	.....	..	..	..	..	..	..
7	3⅝	4,700	4⅝	4⅛	4⅛	Continental Oil of Delaware	(sh)	4,741,554	N.P.	....	12-15-27	47⅞	18	30½	7¾	12	5
35¾	9¾	6,200	11	9¾	10	General American Tank Car	(sh)	751,638	N.P.	$1Q	1- 1-32	123¾	75	111⅞	53⅛	73⅛	28
15½	4¾	1,200	6⅜	6	..	General Asphalt	(sh)	413,333	N.P.	25cQ	6-15-32	94¾	42¼	71½	22⅜	47	9⅝
24⅜	8¾	600	11¾	10¾	10⅛	Houston Oil		$24,968,600	$100	....	10-17-30	109	26	116⅞	29¼	68½	15¾
1⅝	1	100	1	1	..	Indian Refining		$12,564,070	$10	....	10- 1-30	53	13⅛	17	2	4⅝	1⅛
1⅝	½	200	½	½	..	Louisiana Oil Refining	(sh)	1,190,063	N.P.	....	.....	18	7	12	3½	4½	1
1	½	100	½	½	..	Maracaibo Oil	(sh)	330,000	N.P.	....	.....	18½	5⅛	10⅜	1⅜	3¾	½
6½	3¾	3,600	4¼	4	4⅛	Mid-Continent Petroleum	(sh)	1,857,912	N.P.	....	2-16-31	39⅞	22⅛	32	11	16¾	5
9¼	3½	100	5½	5½	..	National Supply of Delaware	(sh)	390,879	$50	....	5-15-31	144	98½	124¾	60	70¼	5
8½	5	3,200	7¼	6¾	7	Ohio Oil	(sh)	6,648,052	N.P.	20cQ	6-15-32	79⅞	64¼	32	16	19½	5⅛
7⅞	7⅞	No sales	..	..	..	Pan American P. & T.	(sh)	1,000,000	$5	25cQ	6-30-32	69	40½	46½	42	35⅛	20
8¼	7⅞	No sales	..	..	..	Pan American P. & T. "B"	(sh)	2,474,288	$5	25cQ	6-30-32	69¼	40½	67¼	30	36½	18
1¼	½	100	⅝	⅝	..	Panhandle P. & R.	(sh)	199,370	N.P.	....	.....	15¼	3	12¾	1¾	4¼	⅝
6½	2	3,100	3½	3¼	3⅛	Phillips Petroleum	(sh)	2,593,075	N.P.	....	1- 2-31	47	24¼	44⅝	11½	16⅝	4
½	¼	200	⅜	¼	..	Pierce Oil Corp.		$29,622,831	$25	....	.....	3⅜	1	2½	½	1½	¼
1⅛	½	3,400	⅝	½	..	Pierce Petroleum	(sh)	2,500,000	N.P.	....	2-16-31	5⅞	½	7⅛	1⅛	3⅜	½
7¼	3½	100	5¾	5¾	..	Prairie Oil & Gas		$61,035,800	$25	....	3-31-31	65⅜	40½	54	11¼	20⅜	4⅛
9¾	5½	1,700	7⅛	6⅞	7	Prairie Pipe Line		$101,250,000	$25	....	6-30-31	65	45	60	16⅝	26½	5⅞
1⅝	⅛	No sales	..	..	..	Producers & Refiners		$37,438,950	$50	....	9-15-23	25⅞	4	11⅞	1	6	1
9¾	1	No sales	..	..	..	Producers & Refiners pfd.		$2,845,350	$50	....	5- 4-25	46¾	25½	40	11½	16	3
5⅛	2⅛	1,500	3⅝	3¼	3¼	Pure Oil		$75,959,250	$25	....	9- 1-30	30¾	20	27¼	7⅝	11⅞	3¼
⅝	¼	200	⅝	¼	..	Richfield Oil (new)		$52,410,875	N.P.	....	.....	49⅝	20	9¾	4⅛	6⅜	⅜
2½	1¾	1,000	2⅛	2	2⅛	Rio Grande Oil	(sh)	1,236,270	N.P.	....	7-25-30	42½	15	25¾	5	10¼	1¼
22	12⅛	1,800	16	15½	15¾	Royal Dutch N. Y.	(sh)	611,303	....	81c†	.....	64	43⅛	56½	36⅞	42⅝	13
9⅞	6⅝	5,800	8⅛	7	7⅜	Seaboard Oil of Delaware	(sh)	1,244,383	$4	10cQ	6-15-32	59⅜	8¼	37	9¾	20¾	5½
15⅜	8	30	10⅛	10⅛	..	Shell Transport & Trading Co.		£23,985,000	£1	55c†	.....	51½	40⅝	48⅜	26	34	5
4⅛	2½	1,500	3	2¾	3	Shell Union Oil	(sh)	13,066,497	N.P.	....	6-30-30	31¾	19	25½	5¼	10¼	2½
31	18	600	19	19	20	Shell Union Oil pfd.	(sh)	400,000	$100	....	7- 1-31	108¼	93	106¼	55	78	15
6	3¼	1,100	4	3⅞	3¾	Simms Petroleum	(sh)	600,000	$20	....	9-15-30	40½	15	37	5⅝	11	3½
4½	2½	200	3⅛	3	..	Skelly Oil		$27,441,250	$25	....	12-15-30	40½	28	12	10⅛	12⅞	2
19	12	200	18	17⅞	..	Skelly Oil pfd.	(sh)	119,800	$100	....	5- 1-31	..	..	99¾	42	62	10
10¾	5¼	21,200	7¼	6¾	6⅞	Socony-Vacuum		$793,613,588	$25	20cQ	6-15-32	..	..	106⅜	98	106	87½
91½	81	200	84⅞	84¾	85	Standard Oil Export pfd.	(sh)	764,885	$100	$2.50SA.	6-30-32	..	..	..	..	21	8⅜
27¾	15⅛	8,600	19⅛	17⅞	18¼	Standard Oil of California	(sh)	13,102,900	N.P.	50cQ	6-15-32	81⅞	51½	75	42½	51¾	23⅛
12⅜	7	3,900	7⅛	7	7	Standard Oil of Kansas		$8,000,000	$25	....	3-16-31	33¾	18	49	14⅜	19	7¾
31½	19⅞	59,500	25⅝	25⅜	24	Standard Oil of New Jersey		$637,961,700	$25	25cQ‡	6-15-32	83	49	84⅞	32½	52½	26
32	24¾	100	27⅛	27⅛	..	Sun Oil	(sh)	1,416,869	N.P.	25cQ	6-15-32	68⅜	55	70	39	45¼	26¾
⅝	¼	100	½	½	..	Superior Oil Corp.	(sh)	766,979	N.P.	....	12-20-30	24	5¼	9⅜	⅝	1⅜	¼
13⅞	9⅜	6,900	10¼	9½	9½	The Texas Corporation		$246,204,900	$25	25cQ	7- 1-32	71⅞	50	60½	28¼	36¼	9⅞
2⅜	1½	700	1¾	1⅝	..	Texas Pacific Coal & Oil Co.		$9,304,890	$10	....	12-31-29	23⅞	9½	14½	4	6½	1⅞
9	5	No sales	..	..	..	Tide Water Oil	(sh)	2,191,759	N.P.	25cQ	6-30-32	40	14	31	13	18	9⅞
41	30	300	35	33	..	Tide Water Oil pfd.	(sh)	199,446	N.P.	$1.25Q	2-15-32	97½	85⅛	94⅞	71	83	30
3½	2	3,600	2¼	2⅛	..	Tide Water Associated	(sh)	5,560,424	N.P.	....	2-16-31	23½	10	17¾	5⅞	9	2⅛
30⅜	20	1,400	27¾	26⅛	26½	Tide Water Associated pfd.		$73,284,500	....	$1.50Q	7- 1-32	90⅞	74⅛	89¾	55	68	20½
13¾	8⅛	1,400	9½	9	9¼	Union Oil of California		$104,342,375	$25	35cQ	2-10-32	57	42⅛	50	10⅛	26⅝	11
19¾	12	500	12⅝	12¼	12	Union Tank Car	(sh)	1,254,048	N.P.	35cQ	6- 1-32	163¾	121⅞	38½	23	25½	16
1½	½	No sales	..	..	..	Warner-Quinlan	(sh)	632,948	N.P.	....	7- 1-30	42⅞	15	27	4¼	7⅜	⅜
5¾	2⅜	5,400	4⅜	3½	4⅝	Wilcox Oil & Gas	(sh)	428,967	$5	...	5-10-28	29¾	12⅞	21	6½	9⅜	2¾

*Ex-dividend. †Final dividend for 1931. ‡Plus extra dividend of 25 cents.

In comparing highs and lows for the several years in the three tables, it will be necessary to take into consideration cases where there have been stock split-ups.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

All inquiries should be signed and if other than the given initials are to be used please indicate the desired letters.

Questions involving patented processes, intricate formulas, and calculations and estimates of costs, for obvious reasons, cannot be answered. The replies will appear on this page within a reasonable time.

SERIES 30 KNOCK TESTING ENGINE

Would it be possible for you to give me a brief description of the latest design of the Series 30 engine for knock testing which is mentioned on your Refinery and Crude Prices page under Octane Ratings? —C. S. F.

The description given here is based on that given under Standard Method for Knock Testing, by W. H. Hubner and G. B. Murphy, The Oil and Gas Journal, April 30, 1931, page 22.

The Standard "Series 30" Ethyl knock-testing apparatus has been fully described by the Ethyl Gasoline Corp. in published articles and descriptive pamphlets. See The Oil and Gas Journal, March 6, 1930, page 190. The description which follows covers only its main features.

The locations of the panel board, fuel cups, float bowls, fuel drains, and knock-meter rheostat have been arranged to permit accessibility of these parts and to increase speed in making knock-rating determinations. The knock rating of a fuel sample as small as 100 cc.'s can be accurately determined.

The engine and accessories, together with the power absorption synchronous generator are mounted on a heavy cast-iron base so as to insure proper alignment of these parts.

The engine is of the single-cylinder, fixed-compression ratio (7.75 to 1), overhead-valve, evaporation-cooled type, and is built specially for knock testing; the bore is 2½ inches, the stroke is 4⅝ inches, and the piston displacement is 22.71 cubic inches.

Engine power is absorbed by a special 220-vole, 3-phase, 60-cycle alternating current synchronous generator which is used first to crank the engine and then to absorb the power of the engine, thereby providing a uniform speed of 600 r.p.m. A special 70-volt direct current winding in the synchronous generator supplies direct current for the ignition system and also for the operation of the knock-measuring instruments.

The carburetor is of the single jet, single choke, horizontal type. A throttle valve is provided in the carburetor for varying the compression pressure of the engine by limiting the amount of charge taken into the cylinder during the suction stroke; compression pressures from 100 to over 200 pounds per square inch gauge can be obtained by throttling.

A three-way cock which is mounted on the carburetor permits fuel to be fed through either one of two float bowls.

The two brass fuel cups are mounted directly on the float bowl covers; they are 2¼ inches inside diameter and specially designed to hold standard 8-ounce fuel sample bottles.

In developing a standard method of knock rating, chemically pure benzene, boiling range 173°-175° F. (this is preferable to commercial benzol) and a blend of selected straightrun gasolines (A.P.I. gravity 60.6, initial boiling point 120° F., 10 per cent point 182° F., 20 per cent point 215° F., 50 per cent point 286° F., 90 per cent point 390° F., end-point 421° F.) have been chosen as secondary or routine reference fuels; pure iso-octane (2, 2, 4-tri-methyl pentane) boiling range 205°-208° F., and pure normal heptane, boiling range 205°-206° F., have been chosen as primary or final reference fuels. Iso-octane, like benzene, is a good antiknock fuel, while normal heptane, like the zero reference fuel, is a hard knocking fuel.

The standard method of procedure for rating a fuel with this engine is to match it, by trial and error, with a blend of benzene and the zero reference straightrun gasoline blend; the per cent by volume of benzene in the blend matching the fuel is termed the "benzol equivalent" of the fuel. Replacing the benzene with the octane-heptane mixtures the blend matching the sample is termed the "octane number."

ODORIZING EXHAUST GAS

It is reported to us that in certain mines in Germany where gasoline locomotives are used that a small quantity of a special oil is added to the gasoline for the purpose of covering the bad odor of the exhaust. Can you tell us what kind of oil this is and where it may be obtained?—J. T. I.

Any odor of an exhaust from an internal combustion engine is usually due to the presence of very small quantities of decomposition products resulting from the partial combustion of the fuel and possibly traces of the lubricating oil. A pure gasoline, such as that meeting the commercial standards, will produce on combustion as gas having the composition similar to that indicated in the table.

COMPOSITION EXHAUST GAS

Substance—	Per cent
Carbon dioxide	14.0
Oxygen	2.0
Carbon monoxide	1 0
Methane	0.5
Nitrogen	82.5

The percentage of the constituents of the exhaust gas will vary with the operating conditions, including engine adjustments, air-fuel ratio and speed. All of these gases are without pronounced odor, that is, have at most but a slight odor which is not easily detected.

The odor of the exhaust gas is usually what is termed "smoky," due to the partial combustion of lubricating oil. Several substances may be present, depending upon the quality of the lubricating oil. The action on the eyes and nose to produce irritation and objectionable odor is frequently due to the presence of acroleine (acraldehyde), or other aldehydes. Sometimes compounded oils are used, containing fish oils, animals oils and fats which when burned produce very objectionable odors; if such oils are used some aromatic oil may be added to mask the objectionable odor. The ordinary condition is that with increase of bad odor there is also an increase in the quantity of the dangerous gas carbon monoxide, which is normally present in fatal quantities. It appears that a good practice is to use pure mineral lubricating oils under any condition where the decomposition products may be seriously objectionable as to odor. It is not safe to cover the ordinary bad odor of combustion because this may often act as a warning agent of a possible poisonous condition.

Upon this subject George S. Rice, chief mining engineer, U. S. Bureau of Mines, states:

"In my various mining investigations in Germany and the Saar, I have observed benzine locomotives in use. They were early used in mines before autos were extensively used. I first saw them in 1908. They are very small, if I recall correctly, have horsepower less than 5, and are used for hauling a few cars at a time on level tracks. * * * They were used only in entries with fresh air ventilation and I do not recall that the fumes were noticeable. The benzine is from their by-product coking plants.

"I recall that I took up the question of an alleged removal of CO of the exhaust, by-passing through an absorbent charcoal was mentioned. If activated it would be helpful, but not completely so. Somewhere in the years between 1927-29, I entered into correspondence with a manufacturer of such locomotives, located near Cologne, but did not receive the impression that the exhaust chambers in which they had lime and charcoal were of much importance. Owing to the limitation in not being able to use the locomotives in gassy parts in mines in contrast with 'permitted' storage battery locomotives and wire rope haulage, the use of the benzine locomotives lessened. Following some serious explosions and fires in Germany and in Lorraine, France, the government officials, I understand, do not permit further introduction of benzine locomotives in either Germany or France but tolerate the use of those already installed in certain parts of the mine.

"In the United States, the use of gasoline locomotives and pumps has generally, in most states, been forbidden in mines because of the hazard—not on account of odor. As an absorbent, 'hopcolite' might be used in the exhaust but that would not do away with the hazards of explosions and fires.

"I am enclosing a copy of Mine Safety Board Decision No. 19 which you may also find of interest.

"In the interest of safety, the U. S. Bureau of Mines recommends that:

"1. Internal combustion engines should not be used in any parts of mines and also should not be used in tunnels under construction because of the hazard of carbon monoxide in the exhaust gases, except:

"(a) When the air current is more than 100 linear feet per minute and the toxic gases are always less than .02 per cent in the air current.

"(b) When the percentage of inflammable gas in the air current is less than .25 per cent and/or inflammable gas cannot be detected in any place by a permissible flame safety lamp.

"2. Gasoline or other highly inflammable liquids should not be used for engine fuel in mines and in tunnels under construction because of the hazard in their transportation and use."

BLENDING NAPHTHA AND NATURAL GASOLINE

Is it possible for you to give us information relative to the blending of natural gasoline and naphtha for motor fuel as follows: How is this done? With what grade of each and how is it mixed, together, by mechanical agitation or just placed in the same tank? Is the cost relatively lower than U. S. Motor? Is the fuel of good quality?—T. R. G.

The blending naphthas quoted on the present market have a gravity range of 50-54° A.P.I. and an endpoint of 430°-450° F. The grade of natural gasoline frequently used for blending with naphtha is the 26-70 grade. This means 26 pounds Reid vapor tension and 70 per cent recoverable at 140° F.; the endpoint is not above 375° F. This grade is predominantly Grade AA, formerly in use.

The quantities of each to be used when blending for a motor fuel will depend upon the exact specifications of the naphtha and natural gasoline available, and the quality of the motor fuel desired. If the required quality of the blend has a gravity of 60° A.P.I., the approximate quantities may be calculated by means of the well-known rectangle formula. Say the gravity of the naphtha is 50° and the natural gasoline 84°, and placing 60 in the center, 50 and 84 in the left hand corners, then the differences set in the corresponding diagonals will indicate the parts to be used of the opposite products, thus:

84 10

60

50 24

This means that 10 parts of 84° gravity product and 24 parts of 50° gravity product will give a mixture having an approximate gravity of 60° A.P.I.

The methods used for obtaining a good mixture include placing the two in a tank and then circulating the liquids out and in through a pump; or drawing the liquids from two tanks through a pump to a third tank, adjusting the valves so as to deliver the proper quantity. Practically all gasolines marketed are blends, because the hydrocarbon liquids suitable for motor fuel vary in composition; and the base products, represented by natural gasoline, gasoline obtained direct from petroleum, and the synthetic product of the cracking process, have to be mixed in such quantities as will make a gasoline meeting the marketing standards.

The factors limiting the quantity of each are vapor tension and endpoint. On the present market 26-70 natural gasoline is priced at 1.75 cents a gallon and Oklahoma 50-52 gravity, 450° endpoint naphtha, at 4.25 cents. The price of U. S. Motor gasoline is also 4.25 cents a gallon. Blending naphtha usually costs the same as U. S. Motor gasoline.

It is advisable, if a satisfactory motor fuel is to be prepared, when making blends of this sort, that the operation be under the supervision of an experienced operator and that adequate testing facilities are available.

PERSONAL PARAGRAPHS

Matt Collins of Petrolia, Ontario, has left for the Trinidad fields under a drilling contract.

* * *

Edward T. Moore, president of the Simms Oil Company, Dallas, is in New York on business.

* * *

Harvey Willson, secretary of the Pennsylvania Grade Crude Oil Association since January, has tendered his resignation, effective July 1.

* * *

Elfred Beck, formerly chief geologist of the Producers & Refiners Corporation, has opened an office in the Exchange National Bank Building, Tulsa.

* * *

A. Williams-Gardner, who, for the past few years, has been engaged by the Anglo-Persian Oil Company, Ltd., upon problems connected with the utilization of natural gas, has returned to London from Persia.

* * *

Mr. and Mrs. E. F. Boyle and two children, Mary Barbara and Kathryn, spent vacations with their parents, Mr. and Mrs. E. M. Boyle at Sullivan, Ind. E. M. Boyle is a gauger with Illinois Pipe Line Company.

* * *

Kenneth W. MacDonald of Los Angeles, member of the firm of Jarvis & MacDonald, operators in the Spindletop Field in Wyoming, made a business trip to that district recently. Mr. MacDonald formerly was city attorney of Casper, Wyo.

* * *

J. H. Ferry of Findlay, Ohio, vice president of Illinois Pipe Line Company, has returned to company headquarters after making an inspection of company lines and properties in the Rocky Mountain region. He was accompanied on the trip by P. W. Hennessy, manager of the Wyoming and Montana division.

* * *

C. E. Erdmann, geologist, and G. H. Cronin, engineer from the Denver offices of the U. S. Geological Survey, have gone to northern Montana where they will be engaged for several months making a detailed survey of the Sweetgrass Hills district, Whitlash and Berthelote structures, and intervening country south as far as Chester, Mont.

* * *

Plans for an inspection trip by Standard Oil Company of New Jersey officials to the newly acquired South American properties of the company are in process of formation. The executives of the New Jersey company will visit the Aruba refinery of Pan American Foreign Corporation, and will likewise inspect the Venezuelan producing, storage, and transportation properties acquired by the New Jersey company in the recent Pan American deal.

* * *

R. G. Phelps, president of the Sylvester Oil Company, Westchester County fuel oil marketing subsidiary of Standard Oil Company of New Jersey, and district manager for the Colonial-Beacon Oil Company in that territory, has started a two months vacation. After a short stay at Sherwood Forest Club, near Annapolis, and then at Atlantic City, Mr. Phelps plans to drive to Los Angeles to see the Olympic Games, visiting California oil fields during his trip. He will return in the fall by steamer via the Panama Canal.

* * *

E. W. Ziegler of Oil City, Pa., has been elected secretary of the Southern Pipe Line Company, Eureka Pipe Line Company, South West Pennsylvania Pipe Line Company and secretary and treasurer of the Cumberland Pipe Line Company to succeed the late Vernon S. Swisher. Mr. Ziegler was born in Venango County and educated in the public schools of Oil City and for nearly 30 years has been associated with Standard pipe line groups. For the past 15 years he has been assistant secretary and assistant treasurer of the Southern Group and is also a member of the board of directors of the South West Pennsylvania Pipe Line Company.

Grady Kirby, geologist for the Sinclair Oil & Gas Company, has been transferred from the Houston district to San Antonio.

* * *

Harry Breisford and E. R. Ellinghausen, both formerly attorneys for the Prairie Oil & Gas Company and Prairie Pipe Line Company at Eastland, Tex., have moved to Fort Worth, Tex.

* * *

Horace E. Cattermole, dispatcher of the Union Oil Company tanker fleet, and a lieutenant in the U. S. Naval Reserve, has just returned from two weeks' training duty spent aboard the U. S. S. Texas.

* * *

C. H. McDuff, who has been district superintendent for the Pure Oil Company, Fort Worth, Tex., has been transferred to the Gulf Coast district, where the company has established a new and separate division. Harry Schoonover is being transferred from Oklahoma to the Fort Worth office to become district superintendent of the Fort Worth division.

Men of the Industry

Henry Hauseman

Henry Hauseman, general traffic manager of the Pure Oil Company since July, 1917, entered the railway service at an early age and has been engaged exclusively in freight traffic work ever since. He has been in the employ of the Delaware, Lackawanna & Western Railway, the Baltimore & Ohio, and the Burlington. After passing a civil service examination he spent four and one-half years in the War Department with headquarters in Omaha, Neb., and Atlanta, Ga., arranging details of troop movements by rail and the transportation of military supplies and other government freight. His principal work was the adjustment of transportation accounts involving land grant settlements. The slow moving bureaucratic procedure was distasteful, and he resigned entering the employ of the Indian Refining Company which, at that time, in addition to operating refineries in Lawrenceville, Ill., and Georgetown, Ky., was shipping imported gasoline in volume from the Atlantic and Gulf ports. In 1917 he became affiliated with the Pure Oil Company.

As a member of the traffic committee of the Great Lakes Pipe Line Company, Mr. Hauseman assisted in the preparation of the pioneer tariff designed under the rules of the Interstate Commerce Commission to meet the requirements of the pipe line.

A. T. Danaher of Minneapolis, Minn., recently made a trip on business connected with interests of the Danaher Mineral Syndicate in Wyoming.

* * *

Walter Curran Mendenhall, director of the U. S. Geological Survey, Washington, D. C., has received the honorary degree, Doctor of Science, from the University of Wisconsin, Madison, Wis.

* * *

Joe E. Denham of Dodge City, Kans., made a business visit to Casper, Wyo., where he was formerly in the banking business. He is now engaged in the production of oil and gas in the Mid-Continent Field.

* * *

W. T. Nightingale, resident geologist for the Ohio Oil Company in the Rock Springs, Wyo., district, has completed a survey of western Washington for the company and mapped the structure where the company is now drilling a deep test.

* * *

The Shell Petroleum Corporation will move the branch office it maintains at Dallas, Tex., to Houston. The Dallas office now includes geological, land, purchasing and production departments. All these will be in Houston when the move is completed.

* * *

E. L. Decker, of Martin-Decker Corporation, Long Beach, Calif., recently was called home from a Mid-Continent business trip because of the illness of Mrs. Decker. The latter's condition is reported as much improved and Mr. Decker expects to resume his interrupted trip soon.

* * *

Mr. and Mrs. J. M. McIntire and Mr. and Mrs. T J. (Ted) White, of Casper, Wyo, left for an outing in the Wind River Mountains above Lander. The trip part way was made by pack horses. Mr. McIntire is manager of the New York Oil Company and Mr. White is a ditching contractor.

* * *

R. S. Shannon of Denver, general superintendent of the Rocky Mountain territory for the Continental Oil Company and Charles W. Whittaker, geologist for that company, recently inspected the company's operation at Big Muddy and left Wednesday morning to inspect the drilling operation of the company at Lance Creek Field.

* * *

Ernest Hall, of Denver, Colo., was seriously injured in an automobile accident in Pueblo, Colo., June 23. His head and chest were crushed when the car in which he was riding turned over, pinning him beneath. The accident occurred on Santa Fe Drive, Denver. Mr. Hall is a well known oil well contractor, having operated in Wyoming, Colorado, and New Mexico extensively.

* * *

Edward L. Shea, vice president of Tide Water Associated Oil Company, has been elected a member of the board of directors of Darby Petroleum Corporation, succeeding M. P. Williams, formerly associated with Tide Water. Other directors were re-elected. Tide Water Associated obtained an interest in Darby Petroleum in 1929 when Darby was merged with Tidal Osage Oil Company, Mid-Continent producing subsidiary of Tide Water Oil Company.

* * *

Dr. Jack Satterly, Dr. Harry H. Hess, Dr. John T Rouse, and Kenneth Wilson, of Princeton University, arrived in Red Lodge, Mont., for the opening of the co-operative research camp in the Beartooth Mountains. Staff members were expected to join them within a few days. More than a score of students representing several colleges and universities last year studied the area bounded by the Yellowstone Park, the Pryor Mountains, the Big Horn Basin and the Yellowstone River. The greatest accomplishment of the group was the completion of the geological guidebook to the region which contains the result of two years' study and exploration. Dr. W. T. Thom of Princton will again head the expedition this summer.

NATURAL GAS DEVELOPMENTS

URGES SINGLE CONTROL OF GAS DEVELOPMENTS

The problem of the conservation of natural gas is one of vital interest to everyone in the natural gas industry. The different states are trying to work out a satisfactory solution of this problem. Claude C. Brown, gas and electric engineer of the Railroad Commission of California, in making a special report recently, advocates the appointment of a single agency or individual to control the production, utilization and wastage of natural gas and oil in California. He states in this report, as follows:

The natural gas produced in California is of two kinds, "dry gas," which comes from dry gas wells which produce only gas and no oil, which can be and are shut in or throttled down as occasion requires, and "casinghead gas" which is produced in conjunction with oil from the wells at the same time that the oil is produced.

The quantity of dry gas produced is relatively small and occurs only during periods of heavy gas demand. On the other hand, the quantity of casinghead gas produced is large and occurs whenever oil is produced from high-pressure wells. The quantity of casinghead gas produced depends upon the production of oil and more closely upon the "gas-oil ratio" of the particular wells under operation.

In as much as the greater portion of the natural gas produced in California is casinghead gas, produced with oil, and further, that in the major fields, such as Kettleman Hills, little or no oil can be produced without substantial quantities of gas, the problem of conservation of natural gas is intimately bound up with and connected with the production of oil from wells in fields of this type, and the two cannot be divorced.

The quantity of natural gas produced depends upon the operations of the oil producers. The market for this natural gas depends largely upon the demands for gas upon the gas-distributing utilities, and in as much as natural gas is now used very generally in California for the purposes of space heating, the demand for gas on the distributing utilities depends largely upon the weather conditions.

In southern California the peak daily demand on a cold, rainy day in the winter time often reaches a figure that is from four to five times as large as the daily demand in the summer time. The demand for industrial gas is not so dependent upon temperature and varies more with economic conditions.

Through the voluntary curtailment during the past few years of both oil and gas production, the amount of gas wasted has been very materially reduced. The following tabulation, taken from this same report, sets forth the results of these influences (total M.C.F. per year):

	1929	1930	1931
Production (net)	557,634,000	544,765,000	385,301,000
Sales to utilities	119,727,000	141,385,000	168,965,000
Field use and other uses	189,430,000	182,388,000	147,758,000
Blown to air	248,477,000	220,992,000	68,478,000

From the above tabulation it will be noted that in the three-year period the production of gas has been reduced 31 per cent; the total utilizations have been increased 2½ per cent; the sales to utilities increased 41 per cent, and the wastage reduced 72 per cent. There was, during the month of March this year an average daily blow to the air of 45,000,000 cubic feet as compared with 1,000,000,000 cubic feet in October, 1929, a reduction of 96 per cent.

This report further states:

The problem of the conservation of natural gas in California is not alone the problem of the oil industry. It is a problem which involves the oil industry as the producer, the gas utilities as the distributors and the residents of California as the consumers. All of these three classes have a definite and common interest in what is done to conserve both the gas and the oil resources in California. Wanton waste or uneconomical production of either or both of these commodities will detrimentally affect all. Reasonable conservation and economical production will inure to the benefit of all.

The production and utilization of oil and natural gas are inseparable. If a minimum of natural gas wastage is to be attained, its production must vary seasonally. If the production of natural gas is to vary with the demand for it, the consequent production of oil must vary with it. It is not feasible to store large quantities of natural gas. The cost is too high. Some can be stored both above and below ground, but the bulk of it must be used as produced. Oil can be and is now being stored in large quantities. There is an economic limit, however, in the storage of oil.

Mr. Brown summarizes his report by stating that other industries have found it necessary to create agencies, consisting in some cases of a single individual upon whom is put the responsibility of creating and maintaining the control of their diversified problems. He believes that if similar action were taken in this case, that the minimum of waste and the maximum of benefit would accrue to the owners that lease the land, the oil industry that produces the commodities, the gas utilities and others that distribute them, the public that consumes and the state that taxes them.

OKLAHOMA DECISION FOR RATABLE TAKING

The authority of the Corporation Commission of Oklahoma to enforce proration and ratable takings of natural gas has been upheld by the Oklahoma Supreme Court in its decision affirming the commission's order in the appeal of the Oklahoma Natural Gas Corp. and others vs. State of Oklahoma, Corporation Commission of the State of Oklahoma and others.

The order of the commission was entered upon the complaint of owners of oil and gas royalty interests in a certain gas well in Creek County who asked that the Empire Gas & Fuel Co. be required to connect its pipe lines with this well and to take from it gas sufficient to equalize its takings from other wells in the same vicinity with which the Empire's lines were connected and that the Oklahoma Natural Gas Corp. be directed to permit the Empire to connect its lines with the well.

The complaint alleged that the Empire was taking a far larger quantity of gas from its connections with other wells in the vicinity than was taken from the complainant's well by the Oklahoma company, and that as a result the complainants were being damaged through drainage of gas from their property interests.

The commission ruled that both companies are common purchasers of natural gas from a common source of supply. The Empire was ordered to connect its facilities with the well and to take an amount of gas which would result in a ratable taking of gas from the well as compared with the takings from the offsetting wells. The Oklahoma company was ordered to permit such connections.

The commission's order pointed out that contracts of the two companies for the taking of gas from the wells with which their facilities are connected were all entered into since the passage of the statute vesting jurisdiction in the commission to require a ratable and fair taking of natural gas by common purchasers without discrimination.

The order was challenged by the companies on the ground that the commission had no jurisdiction to enter it, that it impaired their contracts with well owners and that it interfered with the Empire's interstate business. It was not shown, it was claimed, that the Empire's takings from wells was not ratable, nor that it had taken more of the open flow than is permissible nor more than could be marketed without waste.

The statute, the appellants argued, does not require a pipe line purchaser to purchase ratably from owners of wells with whom it has not contracted to take gas. Such a requirement, it was claimed, would violate provisions of the Federal constitution. Waste prevention is the purpose of the statute, it was asserted, "and waste of gas is not involved here. The commission was not empowered to compel more taking but to prevent takings of more gas than a pipe line purchaser is entitled to." The effect of the order, it was claimed, is to destroy competition and to invite litigation at the instance of other well owners drawing from the common source of supply.

The order was upheld by the Supreme Court, the opinion pointing out that the contracts involved were made subject to the proration statute. The law is designed, it was noted, not only to prevent waste but also undue haste in development and destruction of natural resources.

LONE STAR HEARINGS TO BE BEGUN JULY 11

AUSTIN, Tex., July 2.—Hearings on the valuation of the producing and distributing properties of the Lone Star system for rate-fixing purposes have been docketed to start before the Railroad Commission July 11.

Appraisal of the properties of the Lone Star was made by the State after several cities had complained against the gathering and distributing charges.

The State's petition for a temporary injunction just filed alleged the rate proposed by the Community Natural Gas Co. in 90 Texas towns would be a substantial increase. The present domestic rate provides for a net charge of $1.18 for the first 1,000 feet and 67½ cents for all above 1,000 feet.

Under the proposed rate, the charge would be $1.50 net for the first 1,000 feet; $1.25 for the next 1,000; 75 cents per 1,000 for the next 3,000; 50 cents per 1,000 for the next 20,000, and 45 cents per 1,000 over 25,000 feet.

C. V. Terrell, chairman of the Texas Railroad Commission, points out that the statute gives the commission original jurisdiction over rates in unincorporated towns and towns of 500 population or less, and adds that the commission does not believe these rates should be raised until a hearing is held and some showing made that a raise is necessary.

"If the commission can prevent it, it will not permit a raise in the rates in these small towns and communities until it is shown affirmatively that the rates now in effect are inadequate," he said.

Mr. Terrell said the law regulating gas utilities through the commission directs the manner in which the gas rates may be raised in incorporated towns of over 500 population.

"It provides that in case the gas utility desires a raise in rates that it shall make its application to the city council of the town in which the raise is desired," he said. "If the city council takes no action on this application for a raise within 60 days it can then bring the case to the Railroad Commission and if the commission fails to act upon the application within 60 days the utility can then take the matter to the courts.

"The law does not provide the procedure that shall be followed when a raise in rates is desired in unincorporated towns or communities or incorporated towns of 500 population or less."

TWO APPLICATIONS FOR GAS LINES IN CANADA

CHATHAM, Ontario, July 2.—Further applications for permission to export natural gas from Alberta to Saskatchewan are being considered by the Alberta government, following a hearing at Edmonton. Two formal applications for permission to build pipe lines for supplying gas to Saskatchewan, Regina and Moose Jaw were submitted to the government.

One application, from Norman Ross and the Fabyan Syndicate, represented by H. H. Parlee, K. C., of Edmonton, contemplated the piping of natural gas from the Fabyan section of the Wainwright Field in east central Alberta. The other application from the Messaba Oil & Gas Co. and J. P. McDonald and associates of Duluth proposed to utilize gas production from the Kinsella Field, also in east central Alberta. The application was presented by E. A. Dunbar, K. C., of Edmonton.

Opposition to both applications was presented by G. B. O'Connor, K. C., and Mayor Knott, for the city of Edmonton; by H. R. Milner, K. C., for Northwestern Utilities, Ltd.; and by the United Mine Workers and the Edmonton Chamber of Commerce. Premier J. E. Brownlee promised careful consideration of the arguments.

MIXED GAS RATES

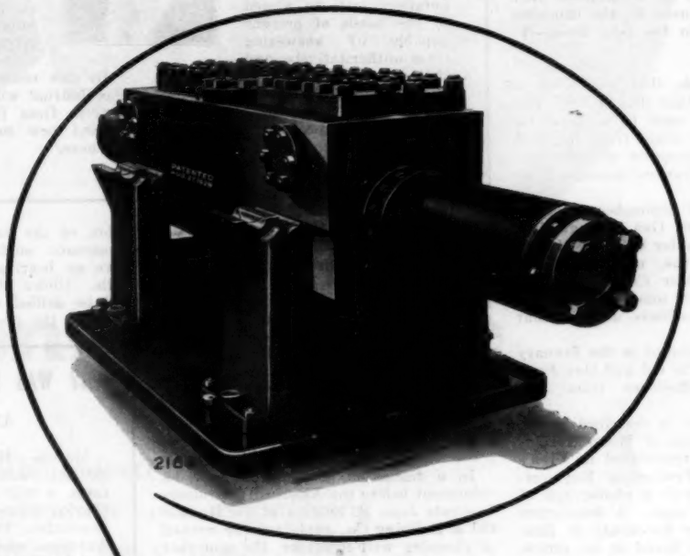
Companies that have mixed natural with artificial gas and attempted to make rates that are acceptable all around have met with considerable opposition and no little misunderstanding, says the New York Journal of Commerce. The matter of cost allocation for the mixed product is quite complex, involving such questions as amortization of existing plant, pipe lines and life of the gas fields. Then, too, the company feels that it is entitled to receive some of the savings resulting from the gas mixture—a view not always shared by commissions. In the end it gets down to the question of why should the company bother with technological improvements if it has to be passed on 100 per cent to its customers.

BOOK ON COMBUSTION

The American Gas Association has just published a new edition of the book, "Combustion," in fact this edition is more than a revision of the previous two issues, for it is essentially a new book. The first edition of "Combustion" appeared in 1924 and since has been considered a standard reference work by all concerned with combustible materials and their utilization.

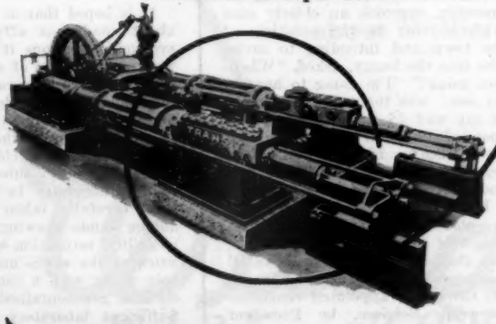
The subjects treated are indicated by the titles of the 12 chapters, which are: Heat and Its Measurement, Gas Volume and Pressure, Chemistry of Combustion, Thermal Capacity, Heat Transfer, Combustion Data of Commercial Gases, Atmospheric Burners, Industrial Combustion Equipment, Temperature Control, Heat Salvage Methods, Gas Analysis, Fuel Comparisons.

TRANSIT
HOT OIL PUMP
FLUID BODIES
"float" in their mountings



TRANSIT
HOT OIL PUMPS
Have This Construction

SEE to it that the fluid bodies of your hot oil pumps are properly mounted, and you will side-step a lot of trouble and expense.



The body is supported at the center line of the bore, permitting expansion in all directions with no change in alignment. Each fluid body is mounted on two water cooled saddles as shown. There are no supports on the bottom.

Note particularly how advantageously the saddles are placed —no possible chance for any distortion of the body.

BEAUMONT, TEXAS
E. L. Wilson Hardware Company

SALT LAKE CITY, UTAH
F. C. Richmond Machinery Co.

NATIONAL TRANSIT PUMP & MACHINE CO.
OIL CITY, PA.

PHOENIX, ARIZ.
Pratt-Gilbert Co.

LOS ANGELES
Republic Supply Company of California

ST. LOUIS, MO.
Reeves & Skinner Machinery Co.

New York Chicago Philadelphia Cleveland Pittsburgh Los Angeles Houston Tulsa New Orleans

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

CONCERNING WATER KNOCKOUT

Where can I get literature dealing with a drip used for the separation of water and oil from flowing wells? I understand there are several types of drips in use in East Texas. We are experimenting with two drips in this area and I want information concerning their use and the results obtained in other areas. The type in which I am most interested is one in which the fluid is held at the well pressure and the beaning is done as the fluid leaves the drip, on the assumption that the emulsion is caused by the churning action of the oil in the flow bean.—V. D. B.

It seems probable that you mean a water knockout, rather than a drip. The water knockout is used to separate oil and water as they come from the well and prevent the formation of emulsions. The drip is used to remove moisture from gas lines.

An article in the September 19, 1929, issue of The Oil and Gas Journal gives information about water knockouts in the Winkler Field, Texas, under the title "Problems of Winkler County Solved." This article describes some of the different type water knockouts used in that area.

A gas drip is described in the January 25, 1930, issue of The Oil and Gas Journal, "Removing Moisture from Gas Lines."

A water knockout is described in W. R. Hamilton's Bureau of Mines Technical Paper 209 and reproduced in Uren's book, "Petroleum Production Engineering" on page 480 with a photograph of it on the following page. A description of the use of water knockouts in East Texas Field will be found in an article on page 15 of The Oil and Gas Journal of May 5, 1932.

USING TWO WEIGHTS OF PIPE

While it is the regular practice to use one size of pipe only in the construction of a pipe line, I understand that some of the big lines now change from one size to another where there is no reason for it so far as the quantity of oil to be run is concerned. Please tell me the reason for this practice.—E. R. E.

So far as information at hand goes, no pipe line has followed the plan you mention. It is believed probable that you have heard of another procedure adopted by the Texas Pipe Line Co. in laying its line from East Texas to the Gulf, that of using two weights of pipe. This was simply a measure of economy which the engineers of the company said could be employed without sacrificing safety. The two weights used were 40-pound and 33.38-pound material.

The practice always followed before that, according to available records, was to use pipe of uniform weight and strength, these to be determined by the maximum pressure exerted at any point. On the line referred to the company took advantage of the fact that at mathematically determined distances out from each station the pressure declines to a point low enough to justify the substitution of lighter and consequently less costly pipe. The place at which the substitution could be made naturally varied from station to station according to the topography of the country, the distance between stations, size of stations, etc., but on this project it was possible to use approximately 120 miles of lighter and cheaper pipe out of the total distance of 208 miles.

SELECTING THE WELL SITES

I was interested in reading the answer to a question by G. F. D. regarding a proposed method of pool development that gives each operator a share in the oil, whether he drills any wells or not. You say that wells should be drilled at points where the oil can be withdrawn most efficiently and the oil distributed among all the owners. I want to ask how it is to be decided at what points these wells should be drilled.—E. G. N.

In a discussion of equitable pool development before the American Petroleum Institute John R. Suman, of the Humble Oil & Refining Co., explained the method of choosing well locations. He said that before drilling is started the general outline of the pool is indicated by the surface geology or geophysical information. The geological or geophysical map may, or may not, accurately define the limits of the pool, but it does give sufficient information on which to initiate a drilling program. Wells are drilled at points selected with the aid of surface geology or geophysical data. As drilling proceeds, subsurface data are accumulated which can be used as a basis for an intelligent development program.

The primary objects of the first wells are to define the limits of the pool accurately, and determine the characteristics of the producing formation. A sufficient number of wells must be drilled to establish the following:

A. Characteristics of reservoir.

1. Area, position, and thickness of producing zone.

2. Geologic structure of the producing zone.

3. Porosity, permeability, and degree of oil saturation.

4. Position and area of oil-saturated part and position of gas-saturated part of the reservoir.

5. Position and level of top, edge, and bottom water.

6. Pressure and temperature of the reservoir.

7. Characteristics of oil and gas. (a) Volume of gas dissolved in oil. (b) Gravity, viscosity, etc. (c) Analysis of oil and gas.

B. Characteristics, underground water.

1. Chemical analysis of top, edge, and bottom water.

From the first wells sufficient information will be available to determine the correct well-spacing program for securing the maximum ultimate recovery of oil commensurate with accepted standards of efficiency and economy. The position of the various land lines which demarcate surface ownerships should have no bearing on the spacing of the wells. Under the proposed plan, wells will be drilled with a close spacing in parts of the pool, while in other parts the well spacing may be very wide. The rate of development should depend somewhat on the proposed rate of withdrawal. In the initial stages of the development of the pool no pronounced withdrawal should be started until the relative content values are established, and until withdrawals can be made at the most advantageous points in the field.

WHY WAS IT CALLED THAT?

ANTWERP

Marcus Hulings completed a 100-bbl. well on the Ashbaugh farm, a mile from St. Petersburg, Clarion County, Pennsylvania, in September, 1871, and the town of Antwerp was a result. The first building, erected in the spring of 1872, was followed in the next 60 days by 200 dwellings, 4 groceries, 3 hotels, a schoolhouse, telegraph office and plenty of saloons. Its general character was summed up thus by a victim of a poker game: "If you want a smell of brimstone before supper, go to Antwerp."

Con O'Donnell, a fun-loving oil operator, overtook an elderly man while driving on the outskirts of the town and intending to invite him into the buggy, asked, "Where you going?" "I'm going to heaven, my son," was the reply. "I've been on my way 18 years." "Well," responded Con, "if you've traveled toward heaven 18 years and got no nearer than Antwerp, I'll take you another route. Giddap!"

Fire in 1873 wiped Antwerp off the planet and it was not rebuilt. Origin of the name is found in the fact that one of the most active oil producers of the region was Dr. A. W. Crawford, appointed consul to Antwerp, Belgium, by President Lincoln. He was instrumental in having an Antwerp firm order 40 bbls. of kerosene, the new illuminant, in 1861. This initial shipment was disposed of with difficulty, but the next year 1,500,000 gallons were taken.

BOTTOM-HOLE PRESSURE

While I work on one of the leases of a major company as a roustabout I feel that it is necessary for me to keep informed about new developments in production procedure. I have noted the use of the terms "bottom-hole pressure" and "bottom-hole gauge" in technical articles in The Oil and Gas Journal and am not entirely clear as to their meaning. From some of the articles it would appear that these pressures are not all taken at the bottom of the hole and I am wondering what the terms used actually mean and how they came to be used in the oil industry.—F. E. N.

Your question is a natural one and many engineers and production men are beginning to consider the use of some other term to cover these operations and the instrument used to obtain the readings. When this type of work was first attempted it was the pressure at the bottom of the well that was actually sought, but with improved instruments readings of pressures and temperatures at any point below the surface are taken.

If maps are made connecting points of equal pressure found by running an instrument in several wells in the same field it is now generally agreed that they properly may be called "contour maps of well pressures." The term "subsurface pressures" has been suggested as probably better describing the operation.

In discussing the "Value of Bottom-Hole Pressures in Geological Interpretations," C. V. Millikan, chief engineer of the Amerada Petroleum Corp., Tulsa, said that his definition of the term was "the pressure taken at the bottom of a well at or near some porous horizon."

The value of such data is now being demonstrated by engineers in determining changes in underground conditions which occur as oil and gas are withdrawn from the underground reservoirs. In the East Texas Field extensive records have been taken by operating companies and when they have been correlated they have shown clearly the zones of equal pressures at the time the readings were taken.

It is hoped that as more is understood about conditions affecting pressures in producing horizons it will be possible to work out reserves of oil and gas in place, rates at which they can be produced most economically, probable rate of decline in pressures, and from these combined data to predict closely the life of the field and its ultimate yield in oil and gas.

In addition to subsurface pressures it will be necessary to have records made from carefully taken cores of the producing sands showing the porosity, permeability, saturation and other characteristics of the sands making up the reservoir, along with a complete study of the oil and gas contained in the formation. Sufficient laboratory work already has been done to indicate how such data can be applied to such problems and it is felt that progress is being made toward establishing rather definite formula for the use of engineers and production men in working out future decline rates in pools that will be more accurate than the older methods.

Descriptions of bottom-hole or subsurface pressure instruments were carried in The Oil and Gas Journal in the issues of May 14, 1931, and June 25, 1931. If you have not already done so, it is suggested that you read the article in the issue of June 16, 1932, by H. D. Wilde, Jr., "Measuring Bottom-Hole Pressure Is Important in Production and Development Control."

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NEW AND IMPROVED EQUIPMENT

CONDITION OF THE HOLE IS REVEALED BY TESTER

A recent addition to the line of tools manufactured at the Santa Fe Springs plant of the Shaffer Tool Works, Brea, Calif., is the Shaffer-Boles formation tester. This device tests for water and for potential production of oil sands. It consists of a valve which may be opened or closed as desired. Below the valve attached by a left hand thread is a packer adapted to the conditions in the hole. The tester is run into the hole on drill pipe or tubing and the packer is set either in the casing or on the shoulder of the rathole formed by the core drill. The tester may be run into the hole closed. After it is set the valve is opened by a few turns to the left and a sample taken. After the hole is tested the valve may be closed and the whole tool withdrawn with the sample. If for any reason the packer should stick, a few turns to the right will disconnect it. The sample then is withdrawn from the hole after which the packer is washed over and recovered.

The tool is said to have been thoroughly tested and operators are able to learn the condition of the formation, thus saving the expense of setting strings of casing until they could be absolutely sure that the formations were oil bearing. Even the smaller sizes are strong and free from trouble. This device is available on a rental basis.

MAKING SHUTOFF VALVE FOR FLUE GAS SYSTEMS

A steam-operated automatic shut-off valve has been developed for flue gas systems for use on tanks. This automatic valve is placed in the flue gas line. It automatically closes if either cooling water or ejector of steam fails.

Use of such a valve has been found necessary in a properly designed flue gas system, according to the manufacturers, to assure the proper functioning of the system, and it is an added factor of safety, being an effective preventive of fire hazard.

This automatic shut-off valve has been developed by the Shand & Jurs Co., Berkeley, Calif., which also manufactures automatic gauges for gauging the contents of tanks.

NEW DIVISION ORGANIZED

The Moon Track Co., Chicago, has been merged with Pettibone Mulliken Co., long established steel casting manufacturer, to form an industrial equipment division. R. W. Moon, vice president and sales manager of the Moon Track Co. will be sales manager of the division. Associated with him will be G. C. Salisbury and E. C. Myers, of Milwaukee, Wis. The address of the new division is Pettibone Mulliken Co., 4710 West Division Street, Chicago. The Pettibone Mulliken Co will manufacture various items of industrial equipment and act as national sales agents for others. The organization has taken over the manufacture of Moon tracks, and a line of power grades and road machinery is being developed. The Industrial Equipment division will distribute Fabriform loaders for Case and McCormick-Deering tractors, Atlasta trailers for trucks and tractors, Detroit street sweepers and snow brushes and Detroit mowers.

Notes About Trade Literature

"Colloidal Graphite, Its Properties, Uses and Advantages as a Lubricant," is the title of a 24-page booklet issued by the Acheson Oildag Co., Port Huron, Mich.

The Esterline-Angus Co., Indianapolis, Ind., is distributing a 12-page bulletin describing and illustrating a new line of graphic meters.

The Dearborn Chemical Co., Chicago and New York, has a circular telling about the Dearborn concentration hydrometer.

A file sheet of Caterpillar specifications up to date is obtainable from the Caterpillar Tractor Co., Peoria, Ill.

The initial issue of "Nickel Steel Topics" has been published by the International Nickel Co., New York. It is an illustrated miniature newspaper devoted exclusively to nickel alloy steels. It contains technical, semitechnical and news articles dealing with the production, treatment and uses of these steels in the rolled, forged and cast form, as well as editorials, question and answer section, and other special features.

The Double Seal Ring Co., Fort Worth, Tex., is sending out a circular announcing a one-piece double seal piston ring which it has developed.

Roots - Connersville - Wilbraham, Connersville, Ind., announces two new bulletins. Bulletin No. 40-B10 is devoted to Connersville rotary displacement meters and includes several installation views, along with a table of ratings, cross-sectional diagrams, etc. Bulletin No. 170-B10 covers R-C-W centrifugal blowers and compressors.

The early summer number of the Painters' Eagle, published by the Eagle-Picher Lead Co., Temple Bar Building, Cincinnati, Ohio, contains among interesting articles one on "What Is Necessary Before Painting?"

A bulletin illustrating and describing the use of welded steel parts in various types of machinery and equipment has been completed for Lukenweld, Inc., Coatesville, Pa.

A loose-leaf bulletin on direct-current generators and exciters is being sent out by the General Electric Co., Schenectady, N. Y.

The Cooper Alloy Foundry Co., 150 Broadway, Elizabeth, N. J., has issued a bulletin describing "Stainless Steel Castings." Among other information for the engineer in the application of chrome iron and chrome nickel iron castings is a table giving physical properties in comparison with other metals.

HILLS-McCANNA OFFERS NEW CENTRIFUGAL PUMP

The Hills-McCanna ball-bearing high-efficiency centrifugal pumps, announced by the Hills-McCanna Co., 2349 Nelson Street, Chicago, are designed to provide a means for greater capacity for each horsepower used, to reduce maintenance cost to a minimum and to give long service. Shaft and impeller alignment is accomplished by providing ball bearings to carry the load in any direction. Not only does this construction lengthen the life of the pump, but it reduces friction losses and permits unusually close tolerance in fitting the impeller in the housing, which increases the delivery for each horsepower used.

The stuffing box is of the split screw gland type, which pulls up squarely, permits proper seal with the minimum pressure and can be packed easily There is no bearing back of the packing, which eliminates the possibility of lubricant entering the pump and mixing with liquid handled. All parts coming in contact with the liquid can be made of any machinable ferrous or nonferrous alloy. Pumps are carried in stock made of acid-resisting bronze, Monel metal pure nickel, Hills-McCanna No. 45 alloy, No. 55 alloy, No. 50A alloy and of close-grained cast iron.

The pump has removable inboard and outboard heads, which is a feature when handling fluids that are highly corrosive, as it is only necessary to replace the heads and impeller. When it is necessary to have equipment that can be taken apart quickly for cleaning the nuts that attach inboard and outboard heads are replaced with large wing nuts which can be tightened without the aid of tools. All parts are made to gauge and are interchangeable, permitting repairs when necessary at a nominal expense.

OXWELD EXTENSOMETER IS HIGHLY SENSITIVE

The Oxweld extensometer, a device to determine the yield point of specimens tested in an Oxweld portable tensile testing machine, has been announced by the Linde Air Products Co., 30 East Forty-second Street, New York. The sensitivity of the Oxweld extensometer is such that it will indicate the elongation in a standard A.S.T.M. test specimen occasioned by the heat of the human hand.

The two points of the Oxweld extensometer are clamped on the specimen to be tested so that the elongation between the two points during tension is multiplied in a ratio of 5 to 1 by a lever bar making electrical contact with the micrometer head. The moment of contact is indicated by the flash of a small electric light in the extensometer head. This feature makes it possible for a single operator using the Oxweld portable tensile testing machine in combination with the Oxweld extensometer to determine both the ultimate strength and the yield point of a specimen.

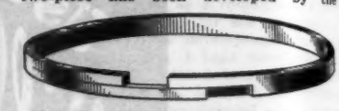
NEW TYPE OF EXPLOSIVE FOR OIL WELL SHOOTING

A new type of explosive, Hi-Velocity gelatin dynamite, developed at the eastern laboratory of E. I. du Pont de Nemours & Co., is described as a straight gelatin that detonates at high velocity with a No. 6 cap, even when shot unconfined. Repeated tests are said to have proved that this material invariably reaches its high velocity within the first 8-inch cartridge.

These new gelatins will be offered in the 60, 70 and 80 per cent straight gelatin grades only, and in diameters not less than 2¾ inches. They are expected to be especially valuable in oil and gas well shooting.

DOUBLE SEAL RING CO. MARKETS NEW PRODUCT

A one-piece piston ring which is said to have the same sealing effect as the two-piece has been developed by the



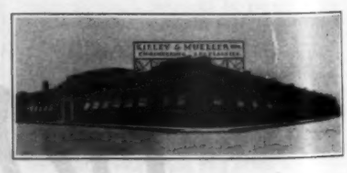
Double Seal Ring Co., Fort Worth, Tex., to meet the demand for a one-piece ring capable of sealing the gap against the cylinder wall and against the ring groove. According to M. L. Munday, sales manager, this meets the demand for a ring that will prevent blow-by in worn cylinders and at the same time be a one-piece type. The new ring is an outgrowth of the double seal two-piece ring in use for many years.

The design of the ring is such that at the gap and for a considerable distance on each side of this gap the construction is almost identical with that of the two-piece ring, having the same fundamental principles of sealing against leakage. It retains, therefore, the advantages claimed for the two-piece construction, together with the practical simplicity of the plain ring. This new construction is made possible by metallurgical engineering and a process worked out by the Double Seal Ring Co.

The new ring is said to meet requirements as to satisfactory sealing of the cylinder against the loss of compression in worn and new cylinders, and to have wide usefulness in the industrial and heavy-duty engine fields, as well as for compressors and pumps. The design of the new ring was worked out after much experimental work and many practical tests. Rings tested in the field are reported to have improved the compression 10 per cent in engines having worn and out-of-round cylinders.

KIELEY & MUELLER OPEN PLANT IN NEWARK, N. J.

The new plant in Newark, N. J., recently purchased by Kieley & Mueller, Inc., manufacturers of steam, water, air, oil and gas specialties, incorporated advanced ideas in factory construction. Face brick is used with fenestra sash, which makes an attractive appearance. Monitor type roof provides maximum daylight so



that artificial lighting is unnecessary even on dark, cloudy days. The building, 135 by 185 feet, provides 25,000 feet of floor space. Additional acreage adjoining the plant provides for expansion.

In selecting the location for their new plant, the officials of the company chose the site at 40 Paris Street because of its ready accessibility to all points in the metropolitan district. Kieley & Mueller, Inc., have been located for 53 years at 34-38 West Thirteenth Street, New York. They will maintain an office there while all manufacturing will be done in the new plant. Joseph O'Connor is president of the firm.

The Kohler Co., Kohler, Wis., is sending out a folder, "Kohler Electric Plants," giving information about the wide range of electric plants in this company's line.

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS Pipe Line Statement for April

Runs

	Month bbls.	Dly. av. bbls.
Gulf P. L. Co.	1,489,648	49,655
Texas P. L. Co.	611,560	20,385
Magnolia P. L. Co.	1,076,368	35,879
Empire P. L. Co.	2,186,018	72,867
Cosden P. L. Co.	614,689	20,490
Stanolind P. L. Co.*	2,700,000	90,000
Oklahoma P. L. Co.	3,333,207	111,106
Other lines*	3,780,000	126,000
Total April	15,791,460	526,382
Total March	16,024,506	516,918
Difference	233,046	9,464

Shipments

Gulf P. L. Co.	1,473,992	49,133
Texas P. L. Co.	1,214,285	40,476
Magnolia P. L. Co.	1,428,042	47,601
Empire P. L. Co.	2,302,415	76,780
Cosden P. L. Co.	613,372	20,412
Stanolind P. L. Co.†	3,781,170	126,039
Oklahoma P. L. Co.	3,131,010	104,367
Other lines*	3,270,000	109,000
Total April	17,214,286	573,808
Total March	17,661,005	569,710
Difference	446,719	4,098

Stocks

Sinclair Prairie Crude Oil Marketing Co.*	35,297,000
Gulf P. L. and Gypsy Oil Co.	7,415,843
The Texas Company	3,678,880
Magnolia Petroleum Co.	8,182,199
Empire Pipe Line Co.	4,966,815
Mid-Continent Petroleum Co.	2,471,839
Stanolind Crude Oil Pur. Co.*	15,669,000
Oklahoma P. L. Co.	1,732,153
Carter Oil Co.	3,544,427
Other lines*	17,284,000
Total April	100,242,156
Total March	100,764,337
Difference	522,181

*Estimated. †Stanolind Pipe Line Co. shipments include Texas crude oil.

EASTERN PIPE LINE REPORT FOR MONTH OF MAY

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky, Illinois, Indiana and Michigan for April and May:

	April, 1932	May, 1932
Nat. Transit	147,723.99	151,951.45
S. W. Pa. P. L.	69,759.24	71,779.11
Eureka P. L.	280,564.95	276,906.64
Buckeye P. L. (Macksburg)	248,423.27	251,442.44
Buckeye P. L. (Cleveland)	11,868.52	12,377.90
Buckeye P. L. (Lima, etc.)	85,459.06	86,475.79
Indiana P. L.	2,726.17	2,672.22
N. Y. Transit	37,613.87	44,012.00
Tide Water P. L.	22,997.64	25,664.15
Pure Oil	380,142.42	423,749.02
Stoll Oil Ref.	22,902.63	58,053.00
Bradford Trans.	410,284.82	427,172.22
Total	1,730,467.58	1,833,255.95
Daily average	57,348.92	59,105.03

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	April, 1932	May, 1932
Nat. Transit	566,440.20	569,129.70
S. W. Pa. P. L.	447,522.55	465,620.47
Eureka P. L.	201,570.72	289,963.58
Buckeye P. L. (Macksburg)	272,180.88	231,855.64
Buckeye P. L. (Cleveland)	1,468.37	1,708.49
Buckeye P. L. (Lima, etc.)	1,480,881.88	1,381,245.31
Indiana P. L.	1,070,857.65	1,188,666.66
Southern P. L.	35,585.53	43,893.07
N. Y. Transit	191,240.50	192,967.42
Northern P. L.	158,940.28	167,202.66
Tide Water P. L.	480,908.25	413,438.33
Pure Oil	490,475.43	573,755.77
Bradford Tran.	439,477.28	462,206.39
Tuscarora Dev.	223,556.91	273,873.53
Total	6,061,106.52	6,243,527.02
Daily average	202,036.88	201,404.09

Gross Stocks

The gross stocks held by various pipe lines in the oil-producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of April and May:

	April, 1932	May, 1932
Nat. Transit	634,782.71	678,894.46
S. W. Pa. P. L.	453,340.11	518,480.70
Eureka P. L.	1,293,097.03	1,224,639.00
Buckeye P. L. (Macksburg)	285,565.79	277,198.32
Buckeye P. L. (Cleveland)	30,490.78	36,639.14
Buckeye P. L. (Lima, etc.)	3,082,716.14	3,160,170.66
Indiana P. L.	476,841.83	502,451.61
Southern P. L.	178,607.70	197,231.45
N. Y. Transit	184,159.11	167,583.00
Northern P. L.	247,444.39	216,814.96
Tide Water P. L.	940,092.95	882,349.04
Pure Oil	834,185.44	711,101.37
Tuscarora	9,256.63	9,033.34
Bradford Trans.	258,081.53	253,149.84
Total	8,908,661.14	8,835,726.89
Increase	106,468.60	
Decrease		72,934.25

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of April and May showing gross stocks of the above fields:

	April, 1932	May, 1932
Pennsylvania	2,978,189.27	3,082,290.24
Lima	540,408.74	527,816.96
Kentucky	9,997.41	9,997.41
Mid-Continent	4,585,299.50	4,552,128.56
Illinois	15,546 86	2,904.86
Michigan	779,219.36	660,588.86
Total	8,908,661.14	8,835,726.89

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1929	1930	1931	1932
Jan.	51,749	75,907	52,939	53,501
Feb.	51,833	79,256	55,163	55,498
Mar.	54,252	76,688	54,331	57,199
Apr.	58,444	84,536	54,914	57,348
May	59,902	70,546	53,344	59,105
June	58,833	75,430	54,110	
July	66,087	68,921	50,723	
Aug.	66,087	54,291	51,503	
Sept.	67,315	56,595	61,345	
Oct.	76,093	58,179	65,595	
Nov.	74,831	52,332	59,819	
Dec.	74,561	53,999	61,835	

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1929	1930	1931	1932
Jan.	165,721	217,623	175,369	186,551
Feb.	159,387	224,355	183,494	169,856
Mar.	161,474	228,846	189,508	188,793
Apr.	169,737	241,845	191,450	202,036
May	184,281	248,383	199,247	201,404
June	185,404	234,401	221,155	
July	194,763	207,094	211,632	
Aug.	194,946	205,506	224,166	
Sept.	201,214	192,999	217,537	
Oct.	191,367	157,675	210,321	
Nov.	202,743	146,638	196,425	
Dec.	186,257	143,001	176,241	

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines at the close of each month for the past three years:

	1930	1931	1932
Jan.	12,220,045	11,831,092	9,023,914
Feb.	12,991,561	11,506,489	8,974,350
Mar.	13,247,217	11,012,162	8,802,192
Apr.	13,233,961	11,044,481	8,908,661
May	13,052,953	10,728,239	8,835,726
June	13,396,855	9,902,349	
July	13,268,562	9,569,849	
Aug.	13,047,051	9,192,457	
Sept.	12,812,018	8,492,431	
Oct.	12,437,553	8,417,694	
Nov.	11,851,380	8,830,386	
Dec.	11,751,952	9,119,032	

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, June 1	549,815.19
Runs from wells	496,220.49
Other receipts	197,594.54
Regular deliveries	241,708.18
Other deliveries	406,130.78

The amount of Illinois oil run by the Tide Water Pipe Co. in May was 25,664.15 bbls. Deliveries were 28,151.70 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1932—	Runs	Deliveries
May	521,884.64	279,859.88
1931—		
Jan.	468,429.04	669,573.19
Feb.	429,284.54	461,262.85
Mar.	424,638.23	356,663.26
Apr.	421,814.98	282,532.65
May	433,231.80	322,513.95
June	510,805.78	320,258.13
July	520,009.38	289,219.05
Aug.	476,623.56	393,231.06
Sept.	492,183.83	323,012.50
Oct.	498,134.13	325,834.95
Nov.	470,302.63	281,256.48
Dec.	518,771.28	306,623.19
1932—		
Jan.	500,177.12	246,634.10
Feb.	482,561.50	186,010.30
Mar.	565,538.70	270,617.75
Apr.	461,930.92	285,817.98

Tide Water Pipe Co., Ltd., also delivered in May 104,554.14 bbls. Oklahoma oil.

Ashland Refining Co. reports well runs of 144,779.26 bbls. during May.

Average Daily Imports of Crude and Refined Oil at Principal United States Ports

Average barrels per day in 1931-32—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
June	30,667	16,833	111,767	27,000	20,833	206,500	3,309	5,500	2,167	1,333	12,309	218,809
July	26,387	11,226	104,678	29,323	21,773	193,387	6,903	7,419	4,194	.....	18,516	211,903
August	32,613	15,581	81,742	23,387	35,741	188,064	4,161	3,516	.....	2,162	9,839	197,903
September	27,067	7,267	106,867	30,099	22,967	194,267	4,833	8,333	.....	.....	13,166	197,433
October	53,710	14,484	100,774	26,742	40,645	236,355	6,097	6,871	2,097	1,833	16,903	253,258
November	48,033	22,800	51,667	25,600	22,967	170,067	3,933	10,833	3,033	1,367	19,166	189,233
December	30,258	16,806	121,807	31,645	34,258	234,774	1,968	4,355	.....	.....	6,323	231,097
1932—												
January	19,161	8,161	104,065	24,194	34,903	190,484	4,871	7,226	2,096	1,484	15,677	206,161
February	32,483	16,517	128,483	28,862	34,552	240,897	2,034	5,207	4,310	1,379	12,930	253,827
March	25,806	10,516	167,806	38,677	48,129	290,935	5,936	39,774	.....	1,516	47,226	338,161
April	37,167	18,467	158,233	38,733	39,400	292,000	6,767	44,600	2,167	3,333	54,867	346,867
May	31,161	2,065	170,226	50,774	14,935	269,161	903	710	4,194	1,516	7,323	276,484

Average Daily Receipts of California Crude and Refined Oil at Atlantic and Gulf Ports

Average barrels per day in 1931-32—	Atlantic Ports: Baltimore	Boston	New York	Philadelphia	Others	Total	Gulf Coast Ports: Galveston	New Orleans, Baton Rouge	Port Arthur, Sabine Pass	Tampa	Total	Total all ports
June	4,367	.....	25,100	6,333	3,500	39,200	.....	.....	.....	.....	.....	39,200
July	6,774	1,194	24,612	11,065	9,902	53,548	.....	.....	.....	.....	1,335	54,883
August	3,452	.....	16,419	7,419	4,290	31,580	.....	.....	.....	.....	968	32,548
September	4,267	3,667	12,933	4,699	7,367	32,933	.....	.....	.....	.....	4,000	36,933
October	2,355	1,129	19,290	16,709	9,323	48,806	.....	.....	.....	.....	3,323	52,129
November	1,000	.....	22,800	11,567	.....	35,367	.....	.....	.....	.....	3,366	38,733
December	3,161	.....	22,484	8,839	6,032	40,516	.....	.....	.....	.....	7,742	48,258
1932—												
January	2,871	1,710	14,483	3,774	5,710	29,548	.....	.....	.....	.....	.....	29,548
February	3,069	.....	9,103	4,862	.....	17,034	.....	.....	.....	.....	2,483	19,517
March	1,516	.....	6,065	.....	.....	7,581	.....	.....	.....	.....	.....	7,581
April	3,500	.....	19,333	3,867	4,833	31,533	.....	.....	.....	.....	.....	31,533
May	2,161	.....	15,226	13,774	3,871	40,032	.....	.....	.....	.....	.....	40,032

Gross Production of Crude Oil in the United States for 12 Months

(In Barrels of 42 Gallons)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mts.	Eastern	Total
1931—										
May:	Month	16,448,960	17,333,867	28,768,484	3,841,266	1,446,274	2,232,568	3,095,419	3,190,000	76,890,138
	Daily average	530,613	559,157	926,986	107,786	46,654	72,018	99,949	102,900	2,445,166
June:	Month	15,641,436	16,678,200	29,139,833	3,178,440	1,344,450	1,850,511	3,086,200	3,186,000	74,983,070
	Daily average	521,381	555,940	971,327	105,948	44,815	61,684	99,540	106,533	2,466,048
July:	Month	16,093,822	16,430,080	33,827,213	3,089,522	1,387,585	1,715,730	3,095,909	3,341,000	78,650,871
	Daily average	519,139	529,680	1,091,200	99,672	41,535	55,345	99,729	107,774	2,538,073
August:	Month	15,668,984	9,517,279	32,279,816	3,141,333	1,166,569	1,584,444	2,897,143	3,167,000	69,331,568
	Daily average	505,451	307,009	1,041,284	101,333	37,599	51,111	90,553	102,161	2,236,502
September:	Month	15,180,610	7,946,580	28,981,525	3,147,030	1,138,380	1,641,324	2,761,230	3,033,000	64,429,039
	Daily average	506,020	264,886	966,051	104,901	37,946	54,713	92,041	101,067	2,180,968
October:	Month	15,661,983	13,951,893	30,735,173	3,177,066	1,172,389	1,832,255	2,797,597	3,000,000	73,198,356
	Daily average	504,903	417,803	991,134	102,486	37,819	58,783	90,247	135,387	2,338,979
November:	Month	14,997,700	16,430,730	28,860,561	3,131,670	1,130,700	1,851,577	2,706,390	3,039,000	72,748,328
	Daily average	499,923	547,691	962,018	104,389	37,690	61,719	90,213	131,300	2,424,944
December:	Month	15,560,984	16,598,299	27,767,651	3,198,642	1,082,148	1,971,817	2,816,759	3,045,000	72,041,300
	Daily average	501,967	535,429	903,860	103,183	34,905	63,607	90,863	117,581	2,342,389
1932—										
January:	Month	15,532,141	13,664,149	26,410,318	3,170,537	1,301,616	1,792,393	2,444,164	3,566,000	67,681,373
	Daily average	501,037	440,779	851,946	102,277	35,536	57,819	78,844	115,032	2,183,270
February:	Month	14,616,862	11,806,190	23,858,375	2,838,839	1,008,562	1,617,087	2,420,224	3,294,000	61,460,139
	Daily average	504,030	407,110	822,703	97,891	34,778	55,762	83,456	113,586	2,119,315
March:	Month	15,575,315	12,997,613	26,162,647	3,042,929	1,062,897	1,702,145	2,617,392	3,553,000	66,715,543
	Daily average	502,443	419,278	843,956	98,159	34,287	54,942	84,432	114,613	2,152,114
April:	Month	15,524,000	12,718,020	25,955,442	2,974,080	1,048,620	1,858,987	2,525,040	3,484,000	66,138,189
	Daily average	517,000	423,934	861,848	99,136	34,954	61,965	84,168	122,800	2,206,272
Total 12 months		186,492,897	165,063,205	342,577,238	37,428,804	13,989,190	21,641,873	32,886,467	41,777,000	841,856,674

Texas Gross Production Report for First Quarter, 1932

Name and address—	Barrels	Value
A		
Aarco Oil & Gas Co., Baltimore, Md.	5,608.61	$4,632.12
A.C.F. Oil Co., Inc., Wichita Falls	12,077.35	9,172.78
Abercrombie, J. S., Co., Inc., Houston	108,106.72	78,598.73
Abraham, Earl, Bridgetown	773.40	614.90
A.C.F. Oil Co., Inc., Wichita Falls (9-30-31)	3,594.32	2,444.14
A.C.F. Oil Co., Inc., Wichita Falls	7,420.57	6,167.37
Acme Oil Co., Longview	13,976.88	11,600.78
Adams, T. C., Bethany, La.	8,059.18	6,689.12
Acorn Oil Co., Beaumont	4,330.77	3,074.52
Adams, Dr. W. B., Wichita Falls	289.33	225.87
Adams, Harry, Co., Midland	16,202.70	8,101.35
Adams & McGahey, Amarillo	17,976.63	11,467.55
Adams & Prince, Amarillo (9-30-31)	4,145.34	1,479.17
Adams & Prince, Amarillo (12-31-31)	5,106.73	3,097.03
Adamson, Petit, Jr., Tulsa, Okla.	201.00	146.69
Adams & Lyles, Lockhart	42,267.73	33,391.56
Adams & Rowe, Inc., Bethany, La.	8,068.01	6,696.45
Adams & McGahey, Amarillo (12-31-31)	14,600.73	8,277.02
Adams & Prince, Amarillo (12-31-31)	4,402.15	2,441.64
Aico Royalty Corp., Tulsa, Okla.	28,266.72	23,461.38
Alaska Petroleum Co., Amarillo	1,133.20	770.58
Albany National Bank, Albany (12-31-31)	3,724.32	3,260.23
Alamo Oil Co., Brownwood	329.00	261.00
Albany Oil Co., Breckenridge	276.00	222.10
Albritain, F. J., Breckenridge	679.61	550.48
All-American Oil & Gas Co., Oklahoma City (12-31-31)	1,118.92	817.83
All-American Oil & Gas Co., Oklahoma City (9-31-31)	1,610.47	791.81
All-American Oil & Gas Co., Oklahoma City (6-30-31)	1,660.53	743.70
A.&P. Production Co., Houston	16,708.12	12,355.62
Alpine Oil & Development Co., Alpine	5,471.24	2,029.22
Alamose Oil Co., Amarillo	5,304.11	2,903.93
Allied Oil & Gas Co., Laredo	88,282.58	66,211.94
Alma Petroleum Corp., Oklahoma City	41,638.84	34,383.59
Alliday Oil Corp., Wichita Falls	69.03	43.49
Ama-Grey Oil Co., Pampa	6,978.46	4,653.55
Almeda Oil Corp., Luling	7,689.20	6,382.03
Amatex Petroleum Co., Tyler	7,068.03	5,866.45
Amada Oil Co., Dallas	38,617.00	13,656.84
Amada Oil Co., Dallas (12-31-31)	60,901.69	28,503.02
Amada Oil Co., Dallas	45,991.08	22,219.44
Ames, E. W., and others, Marshall	347.08	293.09
Amerada Petroleum Corp., Tulsa, Okla.	390,819.87	272,255.76
American Refinery Properties, Wichita Falls (W.M.P.)	1,083.76	837.18
American Refinery Properties, Wichita Falls (N.B.C.)	581.06	477.05
American Refinery Properties, Wichita Falls (C.M.W.)	1,352.25	1,093.60
American Refinery Properties, Wichita Falls	25,690.94	16,477.59
American Maracaibo Co., New York, N. Y.	151,168.71	76,561.48
A.&M. Petroleum Co., El Paso	350.00	175.00
Andrews Petroleum Corp., New York, N. Y.	2,704.32	2,079.31
Anderson, Joseph F., Salt Lake City, Utah	13,521.48	11,222.81
Anchor Oil Producing Co., Dallas	423.17	253.90
Anderson, G. S., Fort Worth	6,871.09	5,702.99
Anderson, G. S., Fort Worth (12-31-31)	13,554.37	10,254.89
Anderson, W. E., McCamey (formerly reporting as Massey-Black)	1,945.28	972.69
Anderson-Drewery Corp., Cisco	4,474.00	3,595.71
Andrews, W. R., and others, Breckenridge	360.72	295.56
Apple-Brandeberry Oil Co. and others, Wichita Falls (12-31-31)	5,978.09	4,505.58
Arab Gasoline Corp., Eastland	1,404.30	1,116.51
Arcadia Refining Co., Tyler	68,906.26	55,995.07
Archer, C. L., and others, manager, Overton	3,766.63	3,126.29
Arco Oil Co., Wichita Falls	18,659.20	11,017.65
Arkansas-Louisiana Pipe Line Co., Shreveport, La.	2,261.53	1,869.49
Arkansas Fuel Oil Co., Shreveport, La.	664,855.06	549,584.57
Arkansas Drilling Co., Longview (12-31-31)	6,102.91	5,065.41
Arkansas Drilling Co., Longview	7,549.48	6,266.06
Artex Oil Co., Wichita Falls	627.50	511.39
Arrow Refining Co., Fort Worth	7,680.63	6,374.92
Armstrong & Wallace (W.J.A.), Cisco	794.80	675.67
Art J. L., Wichita Falls	242.67	214.76
Argus Oil Co., Austin	51.06	32.46
Aston Oil Co., Oklahoma City	19,067.07	15,825.66
Aston, Bert, Henderson (12-31-31)	11,259.42	8,438.61
Aston, Bert, Henderson (9-30-31)	5,569.89	3,991.53
Atkinson & Sandefer Oil Corp., Breckenridge	11,355.61	9,297.99
Atlantic Oil Producing Co., Dallas	764,773.50	568,464.26
Atlantic & Pacafic Oil Co., Tyler (12-31-31)	5,078.45	3,904.82
Arrow Oil & Gas Co., Fort Worth	7,347.73	6,098.61
Arrow Drilling Co., Tulsa, Okla.	12,699.44	10,540.53
Arrowhead Oil Co., Dallas	460.64	366.90
B		
Bailey, Carl B., Wichita Falls	5,642.97	4,722.08
Badger Oil Co., Amarillo	15,044.32	10,978.61
Logan H. Bagby, trustee, Tyler	6,776.88	5,624.79
Bailey & Trimble, El Dorado, Ark.	20,094.16	16,678.16
Baird Oil Co., Putnam	117.24	94.29
Baldwin, F. C., and others, Inc., Fort Worth	3,978.53	3,228.50
Foster Barnsley Syndicates, Inc., Laredo	3,288.31	1,496.32
Baker, James Blair, Jr., and C. F. Camp, trustees, "C" lease, Wichita Falls	682.80	534.82
Baker, James Blair, Jr., and others, "F" lease, Wichita Falls	2,756.72	2,135.99
Baker, J. A., Breckenridge	538.94	405.45
Baker, James Blair, Jr., and C. F. Camp, trustees, "B" lease, Wichita Falls	10,480.54	8,069.90
Bell Oil Corp., Henderson (12-31-31)	13,001.56	10,011.61
Baker, Andy J., Brownwood	94.00	60.33
Baker, J. A. and Mollie B., Breckenridge	5,012.00	3,909.36
Baker, J. F. and H. E., Breckenridge	2,406.00	1,924.80
Baker, Mollie B. and Fred R., Breckenridge	440.00	356.40
Baker & Pardue, Breckenridge	12,371.25	9,033.68
Bates, R. F., Tulsa, Okla.	6,423.73	5,331.70
Bartlett Production Co., Rockdale	404.87	242.92
Barnes, J. B., Electra	5,593.22	4,181.72
Bass & Dillard, Wichita Falls	821.05	695.02
Barnsdall Oil Co., Tulsa, Okla.	254,356.67	206,410.44
Bates, F. A., Shreveport, La.	7,565.20	6,279.11
Bay Oil Corp., Tulsa, Okla.	87,811.84	72,883.80
Bayless, A. A., Fort Worth	492.51	394.00
Bazoon, G. A., Vernon	246.55	186.29
Beard, J. G., Duncan, Okla.	2,632.50	2,184.98
Beard, J. G., Duncan, Okla.	6,877.60	5,708.40
Beard & Hammond Oil Co., Fort Worth	28,622.91	23,787.51
Bearman, J. A., Cisco (12-31-31)	4,562.84	3,138.03
Beggs, George, Strip, Fort Worth	1,252.84	1,356.28
Ada Belle Oil Co., Batson	10,706.92	7,642.13
Beverly Oil Co., Fort Worth	173.35	92.14
Belknap Oil Co., Wichita Falls	7,571.82	6,420.90
Bell Oil & Gas Co., Riverbed, Tulsa, Okla.	6,092.95	3,565.22
Bell & Graddy, Inc., Dallas	6,730.08	5,535.96
Benedum-Trees Oil Co., Pittsburgh, Pa.	1,329.67	997.25
Bernice Oil Co., Saratoga	11,078.61	6,443.30
Bettison, Hillary N., San Antonio	7,261.01	6,026.64
Biel, William A., Von Ormy	144.00	72.00
Bill & Dave Oil Corp., Shreveport, La.	19,356.14	10,109.83
Big Lake Oil Co., Pittsburgh, Pa.	1,432,037.23	1,170,425.64
Big State Oil Corp., Houston	1,786.23	1,407.80
Biggs Oil & Gas Co., McKinney	804.00	653.47
Big Indian Oil & Development Co., Gainesville	7,954.57	6,332.75
Big Indian Syndicates, Dallas	30,796.32	25,560.33
Big Indian Syndicates, Dallas (12-31-31)	31,413.06	25,397.72
Big Indian Syndicates, Dallas (9-30-31)	33,539.81	8,498.34
Birk, C. E. (C. E. Birk and C. L. Kelly), Iowa Park	128.50	101.50
Bishop Corp., San Francisco, Calif.	21,641.00	17,962.02
Black-Knight Co., Peoria, Ill.	7,202.48	5,978.05
Black & Stroube, Dallas	9,396.57	7,799.16
Black and others, Fort Stockton	1,674.96	376.86
Black & Dittman, Fort Stockton	1,794.18	403.69
Blackstock, H. L., Oklahoma City, Okla.	21,790.97	18,086.50
Blackwell Oil & Gas Co., Cushing, Okla.	52,279.25	43,391.79
Blackstock, H. L., Oklahoma City, Okla. (12-31-31)	4,453.08	3,696.05
W. A. Black, Midland	787.11	537.23
Blackstock, H. L., Oklahoma City, Okla.	10,928.55	9,070.69
Black, Harry W., Peoria, Ill.	7,486.84	6,214.07
Black Cat Oil Co., Tyler	716.88	581.76
Bluebonnet Oil Co., Wichita Falls	310.51	249.54
Black, Buster and others lease, Pecos	8,123.76	3,075.63
Boardman-Ulrich, Corsicana	1,533.00	1,211.00
Bob & Richey, Bruni	1,227.24	920.42
Bohner, C. F., Kansas City, Kans.	101.00	77.77
Bohner, Crenshaw & Whitehill, Burkburnett	7,530.90	5,665.76
C. J. Bohner Oil Corp., Burkburnett	19,207.59	15,068.02
Bohner, C. J., and others, Burkburnett	10,576.91	8,145.60
Bolin, D. H., trustee, Graham	5,981.53	4,665.59
R. W. Lindsay Drilling Co. (Bolin & Lindsay), Graham	34,148.60	29,026.31
C. W. Boller, Wichita Falls	18,827.30	15,569.07
Bond & Gillespie, Longview	5,451.00	4,524.32
Bonner Co., Wichita Falls	12,020.03	9,755.42
Bond & Johnson, Longview	14,479.95	12,018.35
Boone Refining Co., Inc., Arp	7,812.00	6,483.95
Borealis Oil Co., Oklahoma City	2,295.58	1,874.98
Bourbon Royalty Co., Dallas	1,960.13	1,359.49
Bowser & Beckett, Dallas	7,106.00	5,898.04
Bowman Oil Co., Rockdale	314.79	188.87
Bowers Oil Co., Vernon	1,038.13	834.44
Bowles, Robert, Oil Co., Longview	6,299.83	5,228.85
Bradstreet, L. G., Co., Fort Worth	24,773.65	20,102.35
Brazos River Gas Co., Mineral Wells	18,447.79	15,665.37
Brazelton Brothers, Graham	2,474.00	2,057.58
Brek Oil Co., Coleman	2,193.40	1,903.12
Brek Oil Co., Coleman (6-30-31)	4,266.95	2,164.93
Brek Oil Co., Coleman (9-30-31)	7,256.69	3,838.79
Breeding-Hutson, Rising Star	1,106.40	668.29
Bridwell & Mayfield, Wichita Falls	4,128.17	3,504.92
Bridwell Oil Co., Wichita Falls	101,737.66	76,333.80
Bridwell & Heydrick, trustee, Wichita Falls	993.13	844.16
Bridges, Milton, Kilgore	49.13	31.44
Briggs, R. F., et al, Corsicana (6-30-31)	6,770.00	5,519.10
British American Oil Producing Co., Tulsa, Okla.	58.00	30.74
Britton & Gordon, Strawn	176,990.42	144,110.10
Brogan Oil & Gas Co. (formerly J. H. Brogan, trustee), Tyler	395.76	331.61
Brothers Oil Corp., Fort Worth (sup. report) (12-31-31)	6,952.08	5,770.23
Brothers Oil Corp., Fort Worth (12-31-31)	2,769.12	2,298.36
Brothers Oil Corp., Fort Worth	2,769.12	2,298.36
Bram, Lee, Glendale, Calif.	7,109.78	5,901.11
Brown & Lickey, Wichita Falls	175.47	142.12
Brown Farm Oil Co., Fort Worth	395.92	320.83
Brannon & Mundy, Abilene	725.79	616.90
Brown, Dr. E. W., estate, Orange	3,399.04	2,886.55
Brown, Mrs. Carrie L., et al, Orange	2,514.22	1,759.95
Brownlee-Pope Oil Co., Austin	3,388.69	2,372.08
Brown, H. L., Fort Worth	1,796.70	1,491.42
Bryson Oil & Gas Co., San Angelo (12-31-31)	6,363.42	3,818.05
Buck Oil Corp., San Antonio	9,707.03	7,633.62
Buchanan, A. A., San Antonio	9,396.64	7,987.14
Buck & Sandwich, Mirando City (12-31-31)	14,600.77	12,018.51
Buck & Sandwich, Mirando City	815.37	611.53
Bunte, C. B., Inc., San Antonio	842.00	631.40
Burkburnett Pro.-Oil Trust, Baltimore, Md.	32,938.67	27,339.08
Burton Drilling Co., Tyler	671.55	508.03
Burch, G. R., Wichita Falls	45,436.36	26,527.46
Burns, Elizabeth L., Wichita Falls	1,423.02	1,162.32
Burns, L. T., Wichita Falls	1,557.93	1,296.68
Burnett & Foshee, Gladewater (12-31-31)	65,634.34	54,860.68
Burnett & Foshee, Gladewater	3,594.20	2,983.19
James N. Burnes, Longview	7,614.48	6,320.02
Burnham, J. M., et al, Fort Worth	3,395.24	2,818.07
Bussa Co., Inc., Vivian, La. (12-31-31)	6,857.21	5,691.47
Buttram Petroleum Corp., Oklahoma City	20,589.00	16,269.00
Buttram, Frank, Oklahoma City, Okla.	23,516.47	19,988.25
Butler & McAlister, Olney (12-31-31)	231.14	184.67
Butler & McAlister, Olney	302.69	237.33
Butler-Calhoun & Boynton, Overton	280.81	233.71
Bynum & Palmer, Rockdale	11,744.62	9,748.05
Bynum, W. W., estate, Rockdale	83.17	49.90
Byrd-Frost, Inc., Dallas	500.35	300.22
	64,867.02	53,839.64
C		
Cable Oil Co. et al, Wichita Falls (9-30-31)	2,586.44	1,810.51
Cable Oil Co., Wichita Falls	5,139.03	4,266.54
Cady, C. C., Shackelford	253.17	149.61
California Consolidated Oil Co., Kilgore (12-31-31)	2,076.76	1,723.71
California Petroleum Corp. of Venezuela, Shreveport, La.	187,545.61	155,665.37
Callihan, George, and Carter Development Co., Inc., Albany	2,249.76	1,733.31
Callihan, George, Albany	95.46	73.50
California Co., The, Dallas	1,002,149.00	515,273.36
Cal-Tex Corp., Kilgore	8,022.25	6,658.46
Cameron Oil Co. and Joiner Petroleum Corp., joint ownership (12-31-31)	9,832.05	7,594.70
Campbell & Tong, San Antonio	13,444.12	5,057.34
Camp Oil & Gas Co., Wichita Falls	361.24	286.75
Campbell, R. S., Humble (12-31-31)	1,042.44	677.68
Campbell & Tong, San Antonio (12-31-31)	3,802.52	3,392.77
Campbell, Alma, Fort Worth	885.57	717.30
Canary, S. C., et al, Tulsa, Okla.	305.82	245.60
Canyon Oil & Gas Co., Inc., The, Cross Plains	2,284.35	1,941.67
Cardinal Oil Co., San Angelo	36,460.32	14,789.32
Carey, E. S., et al (and Miller Drilling Co.), Wichita Falls	169.52	129.04
Carlin, W. W., Ranger	405.13	320.00
Carson, Usher, Laredo	2,500.95	2,491.63
Carter, Fred, Wichita Falls (12-31-31)	2,449.34	1,315.67
Carter, Roy I., Wichita Falls	12,915.60	8,053.92
Caruthers Co., San Antonio	1,100.48	659.36
Cashdollar & Snyder, Brownwood	160.48	110.73
C. & C. Fuel Oil Co., Lockhart (12-31-31)	3,703.00	1,851.50
Central Commercial Oil Co., Tulsa, Okla.	4,013.56	3,331.25
Central Oil Co., Cameron	2,356.60	1,412.16
Central Oil Co., Cameron (12-31-31)	2,590.18	1,313.33
Centennial Oil & Gas Co., Dallas	37,898.00	24,392.08
Cezeaux, P. C., Humble	3,774.00	2,642.97
Chalk, Otis, Big Spring	4,540.20	2,226.68
Champlin Refinery Co., Enid, Okla.	106,575.54	74,933.91
Champlin & Bass, Inc., Tyler	49,860.46	41,384.19
Champlin & Bass, Tyler (9-30-31)	63,733.80	17,880.82
Champlin & Bass, Tyler (12-31-31)	45,758.39	35,472.28

Name and address—	Barrels	Value
Charter Oil Co., Brownwood (12-31-31)	3,545.79	2,371.14
Chatham Oil Co., Tulsa, Okla.	7,812.55	6,585.25
Chenault, W. L., Amarillo	234.29	193.87
Cherokee Chief Oil Co., Gladewater	18,862.25	11,882.26
Choctaw Oil Co., Longview (12-31-31)	7,331.45	6,085.10
Choctaw Oil Co., Longview	6,551.68	5,437.85
Christie Brothers, Wichita Falls	23,747.51	20,037.62
Christian & Edwards, Longview	8,286.98	6,878.20
Christian & Edwards, Longview (12-31-31)	5,974.36	4,958.72
City National Bank, Wichita Falls	607.11	510.04
Clark A. R., Kansas City, Mo. (12-31-31)	53.13	29.75
Clark Buffalo Oil Corp., Buffalo, N. Y.	546.26	433.37
Clark, R. R., et al, Wichita Falls	17,190.40	14,611.58
Clark, R. R., Wichita Falls	7,652.20	6,432.89
Clark & Cowden Drilling Corp., Duncan, Okla.	41,321.69	34,296.97
Clark, C. W., Wichita Falls	4,239.05	3,569.70
Claggett & Evans, Mirando City	1,487.44	1,115.58
Clayton Key Oil & Gas Co., Amarillo	3,923.94	2,773.08
Clear Lake Oil Co., Rockdale	379.37	227.62
Clem Oil Co., Houston	323.52	216.76
Cloud, Jim, Inc., Tulsa, Okla.	43,201.46	30,809.50
Clarkson, Jr., William, Houston	3,967.25	3,207.42
Clay, J. D., Houston	3,097.15	2,168.00
Clopton & Lewis, Dallas (12-31-31)	1,358.22	1,127.32
Coble-Whittenburg Oil Co., Amarillo	448.06	250.91
Cockburn & Boase, Frederick, Okla. (12-21-31)	2,375.00	1,972.08
Cockerhan, Clyde, et al, Shreveport, La.	6,439.76	5,345.01
Cohen, Aaron, Baltimore, Md.	10,559.76	7,668.10
Cole, W. C., Wichita Falls	1,000.58	794.65
Coffield and Hale Oil Co., Rockdale	1,097.46	653.72
Cole Petroleum Co., Laredo	10,353.85	7,765.40
Collie, B. F., Breckenridge	1,176.05	943.15
Columbia Oil & Gas Co., Dallas	87,195.68	68,983.18
Collins, W. J., Luling	7,720.11	6,407.69
Collins-Lanier Synd., Shreveport, La.	7,209.21	5,983.63
Collins, J. L., & Co., Corsicana	14,294.91	11,864.77
Colne Oil Corp., Oklahoma City, Okla.	1,172.16	972.90
Come Oil Corp., Henderson (12-31-31)	13,785.07	10,556.36
Condor Petroleum Co., Abilene	5,334.00	3,512.59
Conservative Oil Co., Dallas	35,840.62	29,747.73
Comet Petroleum Co., Fort Worth	2,205.51	1,102.76
Combined Oil Co. interests, W. B. Powell, receiver, Fort Worth	37,914.90	30,470.20
Consolidated Oil Co. of Texas, Wichita Falls (12-31-31)	72,210.59	49,980.90
Connell, Wixson & Frazier, El Dorado, Kans.	847.16	584.54
Conway Brothers, Ranger	3,090.68	2,570.65
Concord Oil Co., Dallas	7,905.54	6,561.60
Continental Oil Co., Ponca City, Okla.	1,567,089.77	984,068.24
Conner Oil Co., Wichita Falls	10,354.54	8,335.86
Combs, E. B., et al, Long Beach, Calif.	33,366.82	27,694.47
Crockett, J. Q., and R. V. Tidwell, Graham	1,118.58	912.81
Cooper & Hamilton, Olney	1,390.62	1,059.96
Cooper, G. W., et al, Wichita Falls	221.70	188.44
Coppock & Coleman, Iowa Park	8,343.24	6,220.86
Coronado Oil Co., Houston (12-31-31)	28,563.21	18,574.12
Cordova-Union Oil Corp., Fort Worth	89,073.51	73,930.99
Corsellus, C. F., trustee, Fort Worth (12-31-31)	6,939.42	5,759.72
Corsellus Brothers & Taggart, Fort Worth (12-31-31)	2,340.62	1,901.21
Carr, A. P., trustee, Pawhuska	6,847.00	5,683.01
Coronado Oil Co., Houston (12-31-31)	28,563.21	18,574.12
Corley & Blair, Lnogview (12-31-31)	15,256.63	11,927.78
Corley & Blair, Longview (9-30-31)	17,736.26	6,755.33
Cornhusker Oil Co., Lincoln, Neb.	789.48	592.11
Cosden, J. S., Inc., Fort Worth	4,169.77	2,849.23
Cox, Edwin B., Ardmore, Okla.	786.72	583.27
Cox, Edwin B., and Jake L. Hamon, Ardmore, Okla.	81,023.68	67,248.90
C. P. Oil Co., Henderson	66,850.11	35,956.70
Crabb & McNeel, San Angelo	1,201.31	1,000.35
Cranfill-Reynolds Co., Houston	404,762.21	292,169.66
C. R. & M. Drilling Co., San Angelo	11,111.45	9,444.75
Crenshaw Oil Corp., Wichita Falls	7,818.84	6,489.64
Crosbie, T. S., San Antonio	534.15	346.11
Craig & Lowrie, Pittsburgh, Pa.	968.05	641.95
Cresble, J. E., Inc., Tulsa, Okla.	3,583.68	2,006.84
Craft & Connor, Inc., Fort Worth	5,582.00	3,649.25
Crown Oil & Refining Co., Houston	8,439.44	4,371.63
Crown Central Petroleum Corp., Houston	27,508.21	20,631.17
Cron & Gracey, Arp	6,922.79	5,745.91
Cullen, H. R., et al, Houston	782.51	563.41
Cullen & West Production Co., Houston	452,589.63	321,323.77
Cuno, Mrs. Bertha, Moran	1,143.79	876.38
Culbertson Co., Wichita Falls	6,147.45	5,222.12
Cullum, F. P., Wichita Falls	15,334.36	12,548.91
Cunningham & McDonald, Loving	382.09	313.99
Cunningham & McDonald, Loving (12-31-31)	530.06	416.71
Cunningham & Lynch, Graham	6,589.07	6,400.76
Curtis, J. A., Frederick, Okla.	711.51	631.66
Curtis, J. A., Frederick, Okla. (12-31-31)	793.17	640.46
Cushing Refining & Gasoline Co., Cushing, Okla.	5,449.48	2,724.74
D		
Dale & Crawford, Electra	319.23	264.95
Dale Oil & Refining Co., Electra	3,995.80	2,893.14
Dale, Jack B., Wichita Falls	2,057.09	1,719.45
Dalton, Jack, Oil Co., Mineral Wells (12-31-31)	386.16	285.39
Dale-Knotts Oil Co., Wichita Falls	290.86	247.21
D. & L. Production Co., Houston	38,700.17	32,155.19
Da Mac Oil Corp., San Antonio	1,726.74	1,467.73
Daniel Drilling Co., Wichita Falls	2,596.39	2,201.33
Danciger Oil & Refining Co. of Texas, Fort Worth	397,207.83	239,843.80
Darby Petroleum Corp., Tulsa	57,585.87	48,653.01
Dash Production Co., San Antonio	9,343.60	8,377.00
Dash Production Co., San Antonio (12-31-31)	30,160.69	22,444.64
Davis Oil Corp., Vernon	30,624.45	24,098.57
Davis, Louise Reyman, Tulsa, Okla.	x	.45
Davis, Beatrice H., Tulsa, Okla.	x	.45
Davis, Roy, et al, School House well, Longview	5,504.49	4,568.73
Davis, Roy, et al, No. 1 Beamer, Longview	6,731.30	5,586.98
Day & Armstrong, Gladewater	7,397.53	6,139.96
Day & Co., Gladewater	7,003.25	5,812.70
Dearing, R. H., & Sons, Dallas (12-31-31)	13,979.00	10,514.50
DeArman Producing Co., Tyler	25,125.44	20,854.14
Dean & Adkisson, Fort Worth	5,322.77	4,418.40
Dearing, R. H., & Son, Dallas	6,889.36	5,718.16
DeMayo, Bessie, Kansas City, Mo.	14,327.28	11,808.65
Deep Rock Oil Corp., Tulsa, Okla.	59,798.23	49,632.53
Deering, John A., Houston	19,923.01	15,267.35
Deep Rock Oil Co., Tulsa, Okla.	21,064.56	17,475.79
Deep Oil Development Co., Wichita Falls	32,733.31	27,827.57
Degener & Co., Inc., Tyler	1,587.73	1,317.31
Delaney, W. A., Jr., et al, Ada, Okla.	7,130.17	5,918.04
Demontrond Oil Corp., Tyler (12-31-31)	2,499.66	2,074.42
Denwich Oil Co., Abilene	613.36	516.33
Dennis, J. S., Moran	404.90	319.86
Dennis, J. S., Moran (12-31-31)	657.21	469.06
Den-Tex Oil Co., Denison	7,508.24	6,231.84
DeRose Oil & Gas Co., Amarillo	7,179.02	5,269.02
Derby Oil Co., Waggoner "A," Wichita, Kans.	1,443.59	1,111.76
Derby Oil Co., Waggoner "C," Wichita Kans.	2,886.26	2,350.80
Derby Oil Co., Wichita, Kans.	1,785.95	1,206.48
Derby and Haines Oil Co., Wichita, Kans.	1,685.05	1,079.48
Despot, George, trustee, Shreveport, La.	7,091.53	5,885.97
Detroit Texas Development Co., Luling	452.00	248.60
Devonian Oil Co., Tulsa, Okla.	156,474.05	129,764.87
Developers Oil & Gas Co., Wichita Falls	490.00	416.47
Dickey Brothers, Albany	1,310.00	643.93
Dimham Oil Corp., Shreveport, La.	15,443.80	12,818.35
Dink Oil Co., Bagdad, Fla.	5,846.42	4,852.53
Denny & Andrews, Breckenridge	533.55	373.49
Dixon Creek Oil & Refining Co., Amarillo	107,962.49	72,201.56
Dolores Oil Corp., Tyler	5,021.69	4,168.06
Donley & Chastain, Tyler (12-31-31)	12,102.61	9,370.28
Dorough-Smith Oil Co., Marshall	13,762.00	11,422.46
Donley & Chastain, Tyler	6,520.40	5,411.94
Doran, Paul, et al, Fort Worth	6,529.77	5,419.71
Doran, Paul, et al, Fort Worth (12-31-31)	7,216.73	5,989.85
Douglas Brothers Oil Co., Electra	1,105.19	937.39
Douglas Brothers and Johns, Electra	587.65	494.63
Douglas Production Co., Electra	2,914.84	2,336.81
Dowell, B. C., successor to Hill & Dowell, Batson	614.65	431.25
Driscoll, R., estate of, Corpus Christi	18,200.93	13,650.71
Droppleman Drilling Co., Wewoka, Okla.	16,441.23	11,940.99
Duffield & Howard Oil Co., Tulsa, Okla.	468.41	330.55
Duke, W. R., Wichita Falls	6,645.14	5,515.46
Duluth-East Texas Oil Co., Duluth, Minn. (12-31-31)	7,126.83	5,705.62
Duluth-East Texas Oil Co., Duluth, Minn.	5,082.38	4,213.38
Dunigan Brothers, Breckenridge	5,714.04	4,177.77
Dunning, William H., Jr., Fort Worth	8,309.62	6,892.12
Duncan, T. H. P., trustee, Fort Worth (to 2-29-32)	12,692.00	10,534.36
Duncan & Holt, Dallas	14,392.39	11,649.09
Dumas Petroleum Co., Dallas (9-30-31)	9,957.74	4,380.26
Dumas Petroleum Co., Dallas (12-31-31)	12,467.76	9,561.53
Dunaway, J. E., et al, Wichita Falls	915.55	756.87
DuQuesne Oil Corp., Eastland	409.46	310.36
Duval Oil Corp., San Antonio	213,285.68	159,964.27
Dyck Oil Co., Tulsa, Okla. (6-30-31)	12,692.64	5,401.99
Dyke Oil Co., Tulsa, Okla.	22,969.93	19,055.06
Dye & Gillette, Tulsa, Okla.	11,209.09	8,194.43
E		
Earle, E. S., et al, Fort Worth	7,439.00	6,174.37
Easter Oil Corp., Wichita Falls (9-30-31)	21,509.52	9,534.71
Eastern Oil Corp., Wichita Falls (6-30-31)	21,087.07	9,724.21
Easton, E. S., Wichita Falls	529.16	446.91
East Batson Oil Co., Batson	8,812.43	6,168.70
Eastland Oil Co., Fort Worth	29,690.37	18,363.31
East Shore Oil Co., Henderson	20,148.37	16,723.15
East Texas Oil Refining Co., Dallas	434,337.75	347,208.12
Edgar, Joe, Tyler	6,778.04	5,626.77
Edgar, Joe, Tyler (12-31-31)	4,266.25	3,540.98
Edmondson, J. M., San Antonio	719.71	443.44
Edson Petroleum Co., San Angelo	6,486.19	5,383.54
E. & D. Oil Co., Inc., Longview	9,341.27	7,753.25
Eddington, A. T., estate, and associates, Port Arthur	546.00	351.10
Eddington, A. T. estate, and associates, Port Arthur (12-31-31)	95.00	52.25
Eddleman & Payne, Inc., Fort Worth	2,694.17	2,257.70
Kerr, John A., manager, Edward & Hall, Dallas (10-31-31)	22,713.00	2,658.16
Edward & Hall Oil Co., Dallas (12-31-31)	11,118.00	8,525.84
Eckert, F. H., San Antonio (12-31-31)	702.45	432.29
Eckert & Son, San Antonio (12-31-31)	7,494.12	5,058.55
Electra Prod. Co., Inc., Electra	617.94	508.40
Elliott, Harry W., interests, Fort Worth (12-31-31)	149,124.54	86,093.51
Ellis & Anderson, San Antonio	30.92	20.72
Ellis & DuBose, Fort Worth	1,245.11	884.03
Elm Oil Co., Tulsa, Okla.	10,446.21	8,670.35
El Rio Oil Co., Amarillo	391.97	224.43
Emerald Oil Co. of Texas, Winfield, Kans.	7,145.00	4,747.63
Empire Gas & Fuel Co. (Maine), Bartlesville, Okla.	483,108.99	374,449.64
Engel, E. A., Albany	3,818.53	3,128.48
Enterprise Oil Corp., Seminole, Okla.	6,647.58	5,517.49
Eppenauer, A. R., San Angelo	4,581.36	2,290.68
Etnyre Petroleum Corp., Tyler	6,445.65	5,349.89
Erie Investments, Ltd., of Texas, Toronto, Canada	277.60	162.87
Ernest Oil Co., Rockdale	203.50	122.10
Eslick, Mrs. Mattylee, Dallas (6-30-31)	40,159.72	11,918.23
Eslick, Mrs. Mattylee, Dallas (9-30-31)	10,290.72	5,963.75
Estes, Joe E., Tyler	9,457.51	7,642.09
Etex Oil Co., Dallas	7,518.92	6,240.71
Eubank, R. O. and B. K., Coleman	558.56	382.40
Everitt Oil Co., Tulsa, Okla.	5,580.18	4,639.86
Everett, Carl B., Gladewater	5,854.68	4,859.39
Everts, C. A., Dallas	58,882.89	48,872.78
Everett, Carl B., Gladewater (12-31-31)	3,573.79	2,966.25
Equity Oil Co., Fort Worth	7,608.43	6,315.00
F		
Fairway Production Co., Laredo	25,714.42	19,283.34
Fair, R. W., Oil Co., Tyler	7,421.22	6,159.60
Fair, R. W., Oil Co., Tyler	3,797.33	3,149.25
Fain-McGaha Oil Corp., Wichita Falls (12-31-31)	254,743.33	195,929.39
Fain-McGaha Oil Corp., Wichita Falls	214,975.46	173,848.93
Fain-McGaha Oil Corp., Wichita Falls (9-30-31)	233,911.81	108,552.72
Falls Production Co., Wichita Falls	5,774.46	4,785.18
Falvey, J. C., Longview	10,405.59	8,636.63
Falcon Co., Fort Worth	40,659.93	33,747.78
Farish & Ireland lease, Hustn	4,907.23	3,435.07
Farley, George E., McCamey	10,485.43	5,242.72
Farlyn Oil Co., Houston	12,367.44	9,012.12
Farmers State Bank, Burkburnett	658.50	514.52
Feazel-Davenport Corp., Dallas (9-30-31)	40,108.18	12,029.85
Federated Oil Co., Wichita Falls	56,835.56	47,173.52
Federated Oil Co., Wichita Falls (12-31-31)	63,353.43	31,357.34
Fenton, Ralph, Longview	1,680.00	1,394.40
F.H.E. Oil Co., Fort Worth	104,595.75	85,520.93
First National Bank (J. H. West interest), Fort Worth	6,280.72	4,907.02
First National Bank of Wichita Falls, Tex., trustee, G. W. Mennis estate	2,417.80	1,868.41
Flanagan Production Co., Inc., Longview	7,722.67	6,409.82
Fleming-Kimbell Corp., Fort Worth	75,908.83	63,004.33
Fleetborn Oil Corp. and Steinberger & Schwab, Ada, Okla.	9,540.13	7,918.31
Fleming & Kimbell, partnership, Fort Worth	3,120.20	1,911.10
Flynn, W. B., Inc., Beaumont	6,617.54	4,828.29
Foster, Frank R., Inc., Dallas	7,435.25	6,171.25
Four Oil Co., Wichita Falls	1,073.53	832.29
Fox & Adams, Burkett	10,567.33	7,509.83
Fox & Butler, Dallas	20,496.35	17,011.96
Fox, Perry L. and W. R. Thorsen, Mertzon	386.00	270.20
Fraser, H. H., Wichita Falls (12-31-31)	11,575.51	9,126.71
Franklin, Wirt, Ardmore, Okla.	164.21	137.52
French Oil Corp., Laredo	21,514.42	16,135.82
Freeman-Hampton Oil Corp., Wichita Falls	4,780.23	3,822.09
Fresno Oil Co., Burkburnett	23,927.81	18,819.63
Freels, Hugo, Chicago, Ill.	1,023.14	511.56
Friedman Oil Corp. and Swindler, Tyler (12-31-31)	15,455.22	11,517.72
Fullerton, W. R., Wichita Falls (12-31-31)	853.07	626.46
Fultz, F. B., et al, Grana m	2,896.27	2,403.89
G		
Gates Oil Co., Littleton, Colo.	2,841.77	1,849.21
G. & A. Oil Co., Longview (9-30-31)	6,784.20	4,468.67
G. & A. Oil Co., Longview	26,247.94	21,176.26
Gaither Production Co., Rockdale	367.04	220.23
Galvez Oil Corp., Tulsa, Okla.	48,076.06	39,759.41
Gallagher & Lawson, Cisco	86.87	63.42
Gandy, L. O., and J. H. Turner	4,798.72	4,127.14
Gardner, Wilson & McCaldin, Wichita Falls	626.03	465.50
Gardner Bros., Wichita Falls	2,816.69	2,056.17
Gaskill, S. A., Tulsa, Okla.	7,474.04	6,203.45
Gaskill, M. E., Tulsa, Oka.	13,053.67	10,834.57
Gates Oil Co., Ardmore, Okla.	1,868.76	1,509.42
Gates-Baron-Lea, Wichita Falls	2,883.94	2,296.26
Gatlin Oil Co., San Antonio	5,964.33	4,058.03
Geyer, Adolph A., and R. G. Storey, Dallas	5,770.00	4,794.36
Gholson, John M., Ranger	1,110.64	919.28
Gibson & Johnson, Inc., Fort Worth	12,551.72	10,418.04
Gibson Oil Corp., Amarillo	32,263.48	22,925.34
Gilliland & Bailey, Wichita Falls	578.72	473.72

Name and address—	Barrels	Value
Gilman, R. F., and J. L. McMurray, Cisco	5,537.90	5,296.03
Gillman Bros., Amarillo	897.49	669.86
Gilman & Conway Bros., Ranger	3,381.72	2,874.45
G.-I. Oil Co., Wichita Falls	4,683.10	3,584.99
Ginter Lange Oil Co., Inc., Nacogdoches	1,119.48	766.87
Ginter Jones Oil Co., Nacogdoches	364.34	243.19
Gilbert Co., The, Beaumont	1,550.84	1,086.59
Glicrease Oil Co., Tulsa, Okla.	54,646.18	45,273.33
Gillespie, G. L., receiver for F. & M. Drilling Co., Kilgore	7,318.47	6,489.32
Gillespie, G. L., receiver for F. & M. Drilling Co., Kilgore (12-31-31)	11,562.60	8,816.45
Gladis Oil Co., Saratoga	2,340.72	1,765.91
Glasscock, Lonnie, (H. W. Fielder, trustee)	1,631.76	1,318.28
Glasscock Bros., Longview	17,939.87	14,869.94
Glasscock, C. G., Longview	4,831.56	3,508.91
Gladewater Refining Co., Gladewater	1,190.00	409.30
Glass Bros., Rosebud	472.60	283.56
Glover, S. D., Vernon	994.31	785.67
Glenridge Oil Corp., St. Louis, Mo.	2,458.36	2,028.17
Gordon, Ann B., Oil Co., Inc., and H. L. Lowe, Dallas	2,197.90	1,868.22
Golding-Murchison Oil Co., Dallas (12-31-31)	395,068.60	195,081.30
Golden West Oil Co., San Antonio	12,652.05	6,216.96
Goldsmith, N. D., Olney	4,441.55	3,525.67
Golding & Cochran, Dallas	26,472.48	21,595.23
Golding S. Dudley, Dallas	4,349.78	3,374.44
Golding-Murchison Oil Co., Dallas	352,797.45	205,680.91
Gold Star Oil Co., Ardmore, Okla.	7,075.37	5,869.18
Gorsuch Oil Co., Abilene	1,452.24	1,152.44
Grady, Mary E., Electra	865.18	733.66
Graham & Harrison, Graham	3,044.17	2,510.86
Graham, W. T., Longview	72.54	55.21
Graham, Chas., Myra (12-31-31)	695.51	255.33
Graham, Chas., Myra	807.90	282.97
Graham & Harrison, South Bend (12-31-31)	3,512.66	2,596.11
Graham, Cree & Hoover, Amarillo	2,007.90	1,456.77
Graham & Lash, Cisco	139.35	112.05
Granite Trust Co. No. 2, Seminole, Okla.	15,941.95	13,231.82
Granite Oil & Gas Co., Electra (6-30-31)	252.65	214.74
Graybeck Development Corp., Wichita Falls	4,093.82	3,141.19
Grayburg Oil Co., San Antonio	133,968.09	82,614.24
Greene Production Co., G. R. Thomas, receiver, Fort Worth	29,332.54	18,308.03
Greenwood, C. F., Fort Worth	3,281.82	2,723.91
Gray & Adams, Inc., Gainesville	1,496.30	972.60
Great Western Oil Corp., Tyler (6-30-31)	5,930.75	2,736.37
Great Western Oil Corp., Tyler (12-31-31)	21,155.01	14,236.10
Great Western Oil Corp., Tyler	7,407.70	6,148.39
Gregg Oil Co., Gladewater	36,298.10	30,127.42
Grassroots Oil Co., Fort Worth	1,099.80	924.30
Grisham-Hunter Corp., Abilene	33,945.49	27,180.46
Group No. 1 Oil Corp., Fort Worth	965,267.15	735,796.67
G. & R. Oil Co., San Antonio	6,297.48	5,226.91
Guiberson, S. A., Jr., Dallas (12-31-31)	12,359.10	9,550.40
Gulf Production Co., Houston	5,993,620.00	3,981,051.57
Guiberson, S. A., Jr., Dallas (9-30-31)	7,876.79	5,356.22
Guiberson, S. A., Jr., Dallas	16,722.33	13,879.53
Gulf Coast Oil Co., Houston (12-31-31)	25,499.38	17,667.81
Gulf Coast Oil Co., Houston	71,816.22	56,101.60
Guthrie, Cole & Ferguson, Wichita Falls	361.03	283.19
Guthrie, George, et al, San Antonio	3,714.44	3,082.98
Gwynn-Boyd Drilling Co., Wichita Falls	1,095.45	930.91
Gwynn, P. F., Wichita Falls	787.32	637.66
Gwynn, P. F., Wichita Falls	3,248.74	2,731.11
H		
Hammon & Heyser, Wichita Falls	7,426.39	5,925.70
Hamilton & Martin, Wichita Falls	246.74	183.43
Hamilton, W. B., Wichita Falls (12-31-31)	63,095.48	48,544.75
Hamilton, W. L., Bridgetown	841.63	708.63
Hamilton, W. B., trustee, San Antonio	3,071.12	2,252.19
H.A.M. Oil Co., Chicago, Ill.	3,978.10	2,904.01
Hammon, W. H., Wichita Falls	20,115.26	16,993.04
Hamon, Jake L., Ardmore, Okla.	15,109.43	12,394.36
Hamill & Hamill, Bay City	90,380.00	60,554.57
Hamill-Smith Oil Corp., Houston	27,348.17	22,124.11
Hammon & Waggoner, Wichita Falls	858.97	727.09
Hampton & Wilson, Wichita Falls (12-31-31)	77.71	49.33
Hancock, A. R., Gladewater	9,155.25	7,598.88
Hankamer & Lee, Tyler	7,232.91	6,003.31
Hankamer, Earl C., & Co., Sour Lake	272.23	155.56
Hanlon Gasoline Co., Tulsa, Okla.	1,071.91	819.28
Harris, M., Dallas (12-31-31)	1,662.43	1,379.82
Harrison Oil Co., Houston	20,178.35	16,273.64
Hart, W. S., Vivian, La.	937.50	796.87
Hart, Gist Production Co., Albany	1,522.34	1,199.10
Harper Pet., Corp., The, Bryson	11,262.79	9,573.29
Harrell, J. T., Wichita Falls	236.89	199.72
Hardy Oil Co., Wichita Falls	1,148.02	929.22
Hardie, J. M., & Co., Sour Lake	258.34	180.84
Harris & Simons, Tulsa, Okla.	3,491.04	2,129.72
Hasting & Dodson, Kilgore	7,302.12	6,060.76
Hastings, O. L., et al., Overton	7,375.00	3,066.69
Hanbury, Harry, Pasadena, Calif.	21,935.00	18,206.05
Hancock, A. B. (Day & Armstrong), Gladewater	11,753.28	9,755.23
Hawkeye Pet. Corp., Longview	37,405.58	31,046.61
Hawley, J. A., guard. estate of K. Hawley, minor, Ontario, Can.	116.00	89.29
Hawkins, W. L., Wichita Falls	2,160.13	1,709.67
Hayes, Reese L., Olney	1,009.13	775.22
Hays, F. C., trustee, Tulsa, Okla.	1,199.37	964.89
Hayner, J. M., trustee, Tyler	6,615.49	5,491.86
Haynes Drilling Co., Shreveport, La.	73,487.52	60,994.65
H.B.J. Oil & Gas Trust, Baltimore, Md.	1,192.81	936.81
H.B.W. Oil Co., Bagdad, Fla.	7,343.18	6,094.84
H.B.W. Oil Co., Tyler (12-31-31)	5,707.39	4,737.13
Healy, J. R., Casper, Wyo.	5,885.27	4,826.52
Hedrick-Camp Drilling Co., Wichita Falls	1,637.22	1,181.43
Heidrich, E. C., Jr., Amarillo	3,413.69	2,004.74
Heep Oil Corp., Houston	29,471.78	24,461.55
Hefley, McIntosh & Thomas, Cameron	459.37	226.10
Helvetia Oil Co., San Antonio	9,066.25	5,631.19
Hemby, M., Electra	486.27	404.60
Henderson & Holden, Wichita, Kans.	6,869.41	5,701.61
Henry Oil Corp., Luling	9,845.92	8,172.11
Herring, S. C., Brownwood	378.08	321.76
Herrogan Oil Corp., Pampa	8,092.53	5,616.33
Herbert Oil Co. of Texas, Fort Worth	4,255.35	3,338.09
Hetherington, Fred, Fort Worth	1,383.46	1,065.27
Keyser & Heard, Dallas	23,957.50	19,884.68
Heydrick, L. C., Wichita Falls	7,180.62	5,721.40
H. & H. Drilling Co., Gladewater	117.00	92.43
H. & H. Drilling Co., and J. L. Douglas, Gladewater	386.50	305.33
Hickory Oil & Gas Corp., Fort Worth	3,276.77	2,586.24
Hickok Producing & Dev. Co., Toledo, Ohio	143.00	89.83
Hickey, T. J., et al, Corsicana	52.68	41.90
Hill & Dowell, Batson	5,346.32	3,742.25
Hindman, G. W., et al, San Antonio	7,716.57	6,404.75
Hinchliffe, W. W. and J. L., Mexia (12-31-31)	4,264.00	3,539.12
Hinchliffe, W. W. and J. L., Mexia	13,083.00	10,858.86
Hill Read, Inc., Dallas	10,671.82	8,857.61
Hines, Harry, Wichita Falls	1,980.12	1,658.16
Hinton, W. B., Lockhart	178.44	140.96
Hinton, W. B., Lockhart	5,257.60	4,363.31
Hinton, W. B., Lockhart (12-31-31)	246.49	150.83
Hitchman & Howard, Inc., San Antonio	1,586.10	1,060.00
Hobbs, Ferguson & Neeley, Gibbs & Adams, Tulsa	1,289.13	854.82
Hoben & Salmon, Nocona	330.71	99.32
Hoben & Salmon, Nocona (6-30-31)	525.23	156.65
Hoben & Salmon, Nocona (9-30-31)	413.60	149.70
Hoben & Salmon, Nocona (12-31-31)	556.11	217.32
Hoben & Salmon, Nocona	506.15	208.74
Hobbs Oil Co., Tulsa, Okla.	1,060.52	878.65
Hobson & Vorhees, Frost Woodhull, receiver, San Antonio	465.38	314.78
Hoffman, P. L., Cisco	44,488.79	31,244.92
Hoffman & Page Co., Eastland	13,619.47	10,908.87
Holmes, Hill, Seibold & Holmes, Amarillo	13,038.95	9,588.43
Holcombe, Thos., Wichita Falls	633.33	521.78
Hoder, F. W., and J. B. Gordon, Breckenridge	141.21	99.35
Holmes Bros.-Quinn, Amarillo	13,590.56	9,977.35
Holmes Bros.-Moore, Amarillo	2,655.38	1,938.42
Holloway, R. R., receiver, Brownwood (12-31-31)	746.67	622.89
Holloway, R. R., receiver, Brownwood (9-30-31)	629.11	514.96
Holloway, R. R., receiver, Brownwood	532.34	427.41
Holbrook & Woods, Wichita Falls	3,076.85	2,536.64
Home Gas Co., Cushing, Okla.	720.50	439.60
Home Oil & Gas Co., Inc., Albany	638.28	485.30
Hoppes, W. T., Burkburnett	30.00	24.24
Hoppes, W. T., Burkburnett	374.78	325.31
Hopkins, Edwin B., Longview	7,536.81	6,255.56
Hope Oil & Gas Co., Fort Worth	9,722.99	7,790.43
Horseshoe Lease Synd., Dallas	8,342.46	6,924.24
Horn, T. W., Houston	200.00	140.00
Houston Oil Co. of Texas et al, Houston	587,356.65	467,543.13
Houston Gulf Gas Co., Houston	4,984.41	3,738.30
Houston Production Co., Houston	56,998.50	44,383.27
Hooks, Ridgeway & Weaver, Donna, (12-31-31)	1,446.00	910.98
Howard Pet. Corp., Tulsa, Okla.	26,344.84	21,782.13
Howell, E. P., Tulsa	852.13	654.71
Howard County Oil Corp., Longview	7,715.95	3,857.99
Howard, Duffield & Berlin, Tulsa, Okla.	817.33	581.87
Hubei, J. M., Petroleum Co., Borger	20,721.21	11,457.62
Hughes, J. K., Oil Co., Mexia	10,984.84	8,269.25
Ora Huey, Borger	3,249.32	2,079.56
Hull, L. V., Wichita Falls	4,093.02	3,479.08
Humble Oil & Ref. Co., Houston	7,582,278.13	5,684,931.68
Humphreys, A. G., Caddo	407.58	313.82
Humphreys Bros., Inc., et al, Denver, Colo.	338.60	287.84
Hutchinson Drilling Co., Amarillo	516.14	342.43
Hunter & Rowe, Dallas (6-30-31)	197,062.09	43,312.90
Hunter Oil Corp., Chicago, Ill.	12,731.15	10,636.97
Hunter, T. F., Wichita Falls	13,006.78	10,960.19
Hunt, H. L., trustee, Tyler	510,978.25	424,111.91
Hunt, H. L., trustee, Tyler	23,184.79	9,998.72
Hyde & James, Albany	937.76	722.51
Hynes, F. P., et al, San Antonio	12,609.08	10,465.54
Hyer, Fred, Fort Worth	15,292.07	7,646.04
H-Y Oil Co., Inc., Fort Worth	16,264.93	13,134.04
I		
Idaho Oil Co., Longview (9-30-31)	9,135.43	5,439.56
Idaho Oil Co., W. R. Castle, receiver, Tyler	4,214.00	3,497.70
Imperial Pet. Co., Dallas	10,701.24	6,177.44
Indian Territory Illuminating Oil Co., Bartlesville, Okla.	38,772.19	24,051.40
Intercoastal Oil Co., Houston	54,171.80	40,087.12
Invincible Oil Co., Los Angeles, Calif.	26,859.01	22,293.08
10-Tex Oil Corp., Shreveport, La. (12-31-31)	6,945.38	5,764.66
Irish Oil Co., Tyler	3,081.00	1,523.30
Iron Mountain Oil Co., Tulsa, Okla.	484.33	369.86
Isaacs, B. K., trustee in bank, Virginia Oil & Ref. Co., Fort Worth (12-31-31)	18,370.66	15,232.45
Isaacs, B. K., trustee, Virginia Oil & Ref. Co., Fort Worth	26,170.03	21,172.13
Island Oil Co., Longview	15,116.79	12,546.92
Iotex Oil Corp., Shreveport, La.	7,128.63	5,916.76
Iowa-Payne Oil Co., Marshall	42,991.22	35,688.19
J		
Jones-Doss Oil Co., Oklahoma City	15,493.45	12,859.55
Jacob Oil & Gas Co., Graham	2,316.50	1,426.50
Jackson, Wise & Snedden, Inc., Sapulpa, Okla.	32,893.71	27,302.75
Jackson, Wise & Markham, Sapulpa, Okla.	13,290.14	11,030.82
Jackson, J. S., trustee, Sour Lake	1,930.76	1,351.53
Jackson, Wise & Markham, Sapulpa, Okla. (12-31-31)	1,987.86	1,649.92
James & Klinger, Albany	287.00	220.99
Jamison, Pollard & Foster, Coleman	4,197.65	3,559.52
James, Tom, Albany	3,021.62	2,501.77
James, Klinger & Rowland, Albany	65.00	50.05
Janellen Oil Co., Tulsa, Okla.	74.80	51.60
Jay Kay Oil Co., Little Rock, Ark.	13,198.95	10,955.12
Jay Kay Oil Co., Little Rock, Ark. (12-31-31)	5,131.95	4,259.51
Jarrett, W. R., Oklahoma City, Okla.	7,019.37	5,826.49
Jeffries, M. G., San Antonio	9,303.12	7,721.59
Jeffries, M. G., San Antonio	7,435.25	6,171.25
Johnson, F. F., Wichita Falls	314.40	231.60
Johnson Bros., San Antonio	3,881.38	2,528.39
Jones, Edwin M., San Antonio	109,319.55	90,008.99
Jones-O'Brien, Inc., Shreveport, La.	33,010.17	27,398.45
Jones, Hugh, Burkburnett	2,263.31	1,727.38
Jones, Hugh, Burkburnett (12-31-31)	585.00	419.63
Jones, J. A., Moran	* 94.25	80.10
Jones, J. E., Wichita Falls	2,258.58	1,871.71
Jones, O. P., and C. J. Oates, Amarillo	432.00	108.00
Jones, R. C., Cushing, Okla.	14,291.53	11,861.97
Jones, W. B., et al, Wichita, Kans	27,420.06	22,758.63
Jones, E. W. and F. D., Drilling Co., Dallas	14,100.73	11,703.60
J. O. Oil Co., Tyler (12-31-31)	4,042.70	3,355.44
J. O. Oil Co., Tyler	7,135.28	5,922.29
Johnston, T. A., trustee, Tyler	6,278.65	5,211.37
Johnston, T. A., trustee, Tyler	6,042.55	5,015.32
Johnston, T. A., Tyler	3,677.57	3,052.38
Johnston, Replogle & Johnston, Tyler (12-31-31)	8,332.96	7,414.36
Johnston, Wyche & Yarbrough Oil Co., Kilgore (12-31-31)	10,555.95	6,793.63
Johnson, D. L., Fort Worth (9-30-31)	32,225.32	6,626.60
Johnston & Rogers, Tyler	14,933.62	12,394.90
Johnson, D. L., Fort Worth (12-31-31)	20,225.16	15,929.20
Johnson, C. M., trustee, Dallas (12-31-31)	15,761.26	11,327.86
Johnson, C. M., trustee, Dallas	7,285.08	6,046.62
Judson Oil Co., Tulsa, Okla.	4,073.02	3,333.68
Julia Oil Co., Sour Lake	2,771.76	1,940.24
Julian, C. C., Oil & Royalties Co., J. W. Harreld and J. Kingsbery, Jr., receivers, Fort Worth	16,829.41	12,644.02
Julian, C. C., Oil & Royalties Co., J. W. Harreld, receiver, Oklahoma City, Okla.	8,303.91	6,892.24
Julian, C. C., Oil & Royalties Co., J. W. Harreld, receiver, Oklahoma City, Okla. (9-30-31)	14,107.06	5,406.76
Justin Oil Corp., et al, Dallas	4,239.09	3,599.07
Junker & Perkins, Olney	975.25	823.79
K		
Kahle, Gracey & Diver, Dallas	1,704.18	1,039.54
Kaufman, L., San Antonio	142.07	75.30
Karona Oil Co., Dallas	30,183.08	25,163.08
Kathleen Oil Co., McAlester, Okla.	21,423.94	17,740.27
Kay, A. W., and W. B. Fultz, Graham	8,229.99	6,995.55
Kavanaugh Pet. Co., Houston	2,629.02	2,044.51
Keener Oil & Gas Co. of Texas, Tulsa	1,892.74	1,520.17
Keller, T. E., Iowa Park	131.50	101.91
Kelly, George L., trustee, Wichita Falls	263.29	218.52
Kerr, T. F., Corsicana	407.13	319.66
Kerr, E. B., Houston	7,579.92	6,291.33
Kemrow Co. and Bailey, Wooster, Ohio	9,506.81	7,738.58
Kent, G. C., Corsicana	11,354.07	8,265.55
Kent Refining Co., Corsicana	6,942.99	4,146.64
Kenwood Oil Co., McAlester, Okla.	15,909.26	13,299.80
Kendrick, P. S., Albany	1,267.00	1,000.93
Kepley Production Co., Laredo	9,614.24	7,353.50
Keystone Production Co. of Texas, Fort Worth	2,335.39	1,929.89
Key, H. P., Tyler	11,093.00	9,356.19
Kewanee Oil & Gas Co., Titusville, Pa.	170,204.75	133,011.86
Kidney & Lester, Fort Worth	6,731.00	5,600.17
Kidney-Kamon et al, Fort Worth (12-31-31)	2,014.27	1,607.76
Kilgore Refining Co., Inc., Overton	8,259.96	6,687.38
Killam, O. W., Laredo	186,470.72	139,858.57
Kilgore & Hansen, Inc., Longview	3,633.59	2,167.67
Kilgore & Hansen, Inc., Longview (9-30-31)	3,156.66	1,676.97

Name and address—	Barrels	Value
Kimbell G. T., and John L. Bostic, Burkburnett	9,911.00	8,027.91
Kimmell, W. O., Wichita Falls	3,102.36	2,534.31
King, R. A., trustee, Wichita Falls	1,048.93	786.70
King & Massengill, Longview	26,326.00	21,517.60
King & Daniel, Wichita Falls	3,038.55	2,558.55
King, A. D., trustee, Shreveport, La.	22,687.01	18,903.66
King Royalty Co., Wichita Falls (9-30-31)	4,820.46	2,248.80
King Royalty Co., Wichita Falls	184,685.32	155,393.57
Kinnebrew & Simpson, Shreveport, La.	8,148.03	6,762.86
Kingwood Oil Co., Okmulgee, Okla.	20,641.07	17,132.09
Frank E. Kistler & Co., Inc., Littleton, Colo.	812.17	485.87
Kisk Oil Co., Wichita Falls	956.56	702.58
Kiser & Fleming, Albany	1,900.19	1,501.15
Kirby Petroleum Co., Houston	146,681.69	86,935.70
Kleiner, Charles J., Cisco	36,675.11	29,941.50
Kleiner, John H., Cisco	375.92	317.82
Kleinfelder, B. F., Breckenridge	202.24	161.11
Klemcke, George, trustee, Von Ormy	1,199.15	722.84
K. & P. Oil Co., Tyler	24,326.54	20,191.03
Knotts, Nona A., Wichita Falls	558.47	472.62
Knox, D. M., Graham	19,701.25	16,712.76
Koenig, Max W., Oakland, Calif.	11,100.52	5,439.25
Kohlman, Richard, Iowa Park	298.00	240.00
Kolp, C. F., et al, Tyler	15,936.04	13,226.91
Kolp, C. F., et al, Tyler (Foster-Kolp A.)	14,244.65	7,122.33
Kolph, C. F., Tyler	14,715.87	11,908.26
K. & M. Oil Co., San Antonio	14,486.95	10,858.26
Kurs, A. A., Somerset	292.45	177.31
Kuhlemeier-Kleiner Oil Co., Cisco	453.02	375.39
Kurs Oil Co., Somerset	398.74	239.33
Kimmell & Woofter, Wichita Falls	4,182.23	3,450.11
L		
Lackey, W. G., Co. (Bourbon Royalty Co.), Tulsa, Okla.	1,510.36	1,195.57
Lacy Petroleum Co., Inc., Longview	7,518.81	6,240.61
Lake View Oil Co., Sour Lake	7,893.28	6,525.30
Lake Graham Oil Co., Houston	1,212.05	848.44
Laird, S. S., receiver, Cash & Coleman, Kilgore	6,719.35	5,577.05
Lampston, H. W., Winona	9,989.02	8,290.89
Landreth Prod. Corp., Fort Worth	96,247.21	48,394.10
Laster, E. C., Inc., Henderson	5,664.14	4,701.23
Lawson, estate of Eugene B., Tulsa, Okla.	23,042.23	18,386.61
Leonard, George, Somerset	1,200.87	750.77
Lechner & Hubbard, Dallas	13,741.05	11,405.07
Leck Royalty & Oil Co., Fort Worth	2,310.63	1,923.32
Lefors Pet. Co., Lefors	16,483.11	10,411.30
Lester & Duffield, Fort Worth	6,875.00	5,706.44
Lee, Homer, Wichita Falls	9,242.48	7,617.59
Lee & Phillips, Gladewater	9,705.94	8,055.93
Lesh & Co., John L., Nocona	4,306.08	2,992.75
Lesh, Kilcrease & Co., Nocona	1,803.35	1,100.04
Lesh & McCall, Nocona	35,274.94	26,176.64
Lee & Hankamer, Tyler	4,065.82	3,374.63
Len Cook Oil Co., Electra	301.77	253.01
Leonard Petroleum Co., et al, Washington, Pa.	45,469.26	37,739.48
Leonard Pet. Co., Washington, Pa. (12-31-31)	74,441.19	57,269.87
Letwin & Lippitt, Breckenridge	25,848.00	21,758.26
Lewis, J. E., et al, Eastland	397.52	315.97
Lewis & Co., J. E., Eastland	907.27	734.88
Lewis & Slagel Drilling Co., Colorado (9-30-31)	1,773.75	598.87
Lewis & Slagel Drlg. Co., Colorado (6-30-31)	192.23	57.66
Lewis & Slagel Drlg. Co., Colorado (12-31-31)	2,800.59	1,233.94
Lewis & Slagel Drlg. Co., et al, Colorado	2,228.00	1,114.00
Lewis & Slagel Drlg. Co., Colorado	1,122.60	673.56
Lebow, C. H., Tulsa, Okla.	1,112.96	945.07
Lewis Prod. Co., Pittsburgh, Pa	56,798.09	46,430.08
Stanley Lewis, Oklahoma City, Okla.	15,034.94	12,479.01
Like-Taylos Oil Co., Shreveport, La.	38,938.86	30,416.17
Lide-Rowe Oil Co., Inc., Shreveport, La.	30,014.72	25,005.50
Lido Oil Co., Wichita Falls	39,095.61	30,633.62
Little Flowers Oil Co., St. Louis, Mo. (12-31-31)	315.22	209.48
Little, I. C., Longview (6-30-31)	95,483.10	31,342.31
Little, I. C., Longview	15,632.50	12,974.77
Little, I. C., Longview (12-31-31)	49,564.06	29,021.22
Little Caesar Oil Co., Longview	7,706.66	6,396.53
Little, Wm., Breckenridge	153.95	114.41
Lion Oil & Refining Co., Eldorado, Ark.	448,033.30	226,802.02
Linedo Oil Co., Lincoln, Neb.	407.18	305.38
Hamill, J. G., receiver, Lively & Bryan et al, Fort Worth (12-31-31)	3,560.46	2,816.90
Hamill, J. G., receiver, Lively & Bryan et al, Fort Worth	12,546.17	10,413.33
Hamill, J. G., receiver, Lively & Bryan et al, Fort Worth (9-30-31)	23,147.89	6,822.33
Lockhart, H. L., Gladewater	3,008.50	4,561.39
Lockhart & Co., Los Angeles, Calif.	65,447.79	32,723.96
Loggie & Arendt Oil Co., Albany	1,272.04	930.61
Long, C. B., et al, Wichita Falls	375.34	296.21
Long, L. A., et al, Graham	40,622.73	35,071.38
Long, Roy, Oil Co., Navasota	1,109.31	667.18
Lone Star Oil Co., Ardmore, Okla.	7,353.72	6,103.65
Lone Star Gas Co., Dallas	20,272.00	17,100.27
Lone Star Gasoline Co., Dallas	7,383.00	5,949.55
Lone Pine Oil Co., Tyler	8,491.48	7,047.92
Los Olmos Oil & Gas Co., Harlingen	3,059.45	1,591.52
Louisiana Oil Ref. Corp., Shreveport, La.	63,210.89	39,344.28
Lowenstein Oil Co., Rockdale	820.42	492.25
Lucey Petroleum Co., Dallas	77,255.80	64,122.32
Luling Oil & Gas Co., San Antonio (12-31-31)	85,650.30	58,977.64
Luling Oil & Gas Co., San Antonio	77,355.34	48,998.61
Lutcher Oil Co., Shreveport, La. (12-31-31)	12,359.35	9,725.55
Lytle, C. F., Mexia	6,951.78	5,282.68
Mc		
McAlbert Oil Co., Inc., Houston	16,850.51	12,309.45
McBride, W. C., Inc., St. Louis, Mo.	4,479.91	3,245.15
McBride, L., Jr., receiver, R. H. Dearing & Sons vs. C. B. Mitchell, Dallas	5,174.85	4,295.13
McCarty, W. W., and E. T. Martin, Wichita Falls	4,704.71	3,901.35
McCarty Oil Co., Wichita Falls	44,945.60	37,636.01
McCutchin, Alex, Arp	12,421.38	10,083.87
McClintock, J. G., Amarillo	5,415.00	3,455.45
McConnell, Will H., trustee, Tyler	6,776.86	5,624.79
McClanahan & Venable Oil Co., Tyler	18,182.42	15,091.44
McCarter, R. C., Rising Star	731.35	534.00
George B. McCamey, Fort Worth	6,723.67	5,580.64
McCormick & Noack-Wooten, Rockdale	40.23	33.73
McCurdy, E. J., Jr., Fort Worth	7,364.93	3,643.01
McCurdy & Easter, Upton County	7,463.88	3,731.95
McCrary, E. W., Tulsa, Okla.	3,338.04	2,531.00
McCutchen, C. E., trustee, Wichita Falls	4,478.54	3,717.18
McDaniel, D. B., Houston	43,463.19	31,041.34
McDaniel, D. B., and Albert Plummer, Houston	6,933.28	5,754.61
McDaniel Oil Corp., Cisco	2,790.25	2,372.76
McDonald & Campbell, Dallas	18,267.62	15,054.48
McDonald Bros., Mount Pleasant	8,043.13	6,675.80
McEntire, J. B., trustee, Tyler (9-30-31)	20,068.04	6,666.29
McEntire, J. B., trustee, Tyler	6,947.24	5,766.21
McGinley Corp., The, Fort Worth	3,045.91	2,395.30
McIlroy Oil Co., Amarillo	17,856.15	11,481.40
McJunkin, Florence T., et al, Tulsa, Okla.	316.91	270.82
Macknold Co., San Antonio	128.00	87.53
McLester Oil Co., Eastland	5,151.09	4,369.13
McLemore, Ada., Albany (9-30-31)	2,311.50	1,233.78
M.C.H. Corp (Ada McLemore) (12-31-31), Albany	312.45	219.41
McMahon, Chas. L., Tulsa, Okla.	58,025.62	43,161.53
McMurray, T. C., receiver Breck Oil Co. or Brown & Eckholm, Forth Worth	7,573.61	6,437.42
McMurray, Jim, and Alfred Macmillan, trustee, Tyler (9-30-31)	255,154.21	25,345.38
McMurray, Jim, and Alfred Macmillan, trustee, Tyler (12-31-31)	32,074.24	24,393.45
McMurray, R. J. and M. H. Houston (6-30-31)	234,221.98	45,798.19
McMurray, R. J. and M. H., Houston (9-30-31)	23,432.65	7,769.08
McMurray, R. J., trustee, Houston (9-30-31)	48,808.12	14,069.64
McMurray, R. J., trustee, Houston (6-30-31)	9,612.35	2,490.15
McMurray, M. H., Henderson (12-31-31)	14,563.65	11,007.83
McMurray, Root & Rhodes, Eastland	431.00	366.00
McMurray-Fair, Inc., Tyler	10,644.52	8,834.95
McMurray, T. C., receiver Breck Oil Co., Fort Worth (12-31-31)	4,644.43	3,717.87
McMurray, J. L., et al, Cisco	1,565.11	1,332.85
McNallen & Griffin, Tulsa Okla.	5,163.51	4,070.51
McNamara Oil Co., Beaumont	583.46	411.93
M		
Mabee, J. C., Co., Tulsa, Okla.	77,202.76	61,894.28
MacDermott, W. F., Fort Worth	486.53	371.63
Madden, E. B., Olney	7,342.57	6,236.38
Madden & Hunt, Olney	4,469.14	3,663.74
Madison Oil & Gas Co., Electra	2,636.56	2,330.48
Magnolia Petroleum Co., Dallas	3,329,294.97	2,422,321.12
Malernee-Bullock Oil Co., Oklahoma City, Okla.	7,253.42	6,020.34
Mann & Forbes, Graham	1,746.78	1,461.14
Mann, Floyd, Graham	935.45	768.89
Mahaney-Hill Pet. Corp., Dallas	7,045.75	5,847.95
Manson Oil Co., Chickasha, Okla.	20,691.57	17,174.00
Marnet Oil & Gas Co., Tulsa, Okla.	3,141.61	2,494.12
MacMillan A., and Jim McMurrey, El Dorado, Ark.	21,705.07	18,015.21
Markham & Dunning, Fort Worth	28,636.47	23,768.29
Marine Production Co., Longview	5,349.85	4,440.38
Marine Corp., Dallas	45,252.72	57,383.77
Mark Finston Special Acct., Tulsa, Okla.	7,424.45	5,605.20
Marlin Oil Synd. (M. O. Swallow, receiver), Longview	7,240.13	6,009.31
Marr Drilling Co. (J. E. Marr), Tyler	3,735.17	3,099.61
Martin Drake & Jones (O. C. DuPree, receiver), Houston	10,096.33	7,067.43
Martin, H. W., San Bernardino, Calif. (12-31-31)	21,303.27	10,651.64
Martin, H. W., San Bernardino, Calif.	18,698.53	9,349.26
Martin, N. H., Wichita Falls	7,302.24	5,510.44
Martin & Hamilton, Wichita Falls	2,979.42	2,296.92
Martin, Drake & Jones, Houston	21,143.34	17,531.88
Martin, Drake & Jones, Houston (1-19-32)	2,455.46	1,718.82
Martin, Drake & Jones, Houston (12-31-31)	13,875.98	8,972.81
Martin, Drake & Jones, Houston (6-30-31)	16,261.54	10,645.30
Martin, Drake & Jones, Houston (9-30-31)	15,436.71	6,828.23
Marts, E. R., Dallas	2,170.90	1,529.40
Martin F. W., Co., Tulsa, Okla.	3,763.43	3,123.65
Margay Oil Corp., Tulsa, Okla.	62,857.45	52,171.69
Massie, J. H., Wichita Falls	36,530.25	30,548.24
Matthews, W. H., Longview (12-31-30)	2,863.00	2,376.29
Matthews, W. H., Longview	9,037.33	7,500.98
Maxwell, J. C., Fort Worth	22,754.55	11,722.38
Mays, R. H., Fort Worth	571.35	485.57
Maynard and E. S. Taxman, Wichita Falls	5,659.49	4,804.20
Mayberry, C. R., Co., Laredo	1,567.72	1,175.79
Means, J. C., Jr., Tyler	8,534.00	7,083.22
Means, E. W., Borger	2,612.00	1,436.00
Mecom Oil Co., Liberty	1,677.73	1,174.41
Mendenhall Oil Co., Cisco	711.70	604.94
Menke, John G., Wichita Falls (12-31-31)	326.40	182.10
Menke, John G., Wichita Falls	638.02	542.29
Mercury Pet. Corp., Fort Worth	2,222.37	1,844.56
Merrick, John F., Wichita Falls (12-31-31)	418.16	317.58
Merrick, John F., Wichita Falls	166.13	141.20
Merrick & Goldsmith, Wichita Falls	2,541.67	2,160.40
Merrick & Belcher, Wichita Falls	5,401.46	4,591.24
Merren, K. E., trustee, Shreveport, La.	9,258.83	7,273.32
Merren, K. E., Shreveport, La.	11,701.24	9,155.54
Mercury Pet. Corp., Fort Worth	9,304.67	7,722.87
Meredith & Gant, Wichita Falls	1,481.42	1,076.42
Merrick & Bristow, Ardmore, Okla.	26,325.00	13,162.50
Merrick & Lamb, Ardmore, Okla.	21,804.67	11,589.68
Merry Bros. and Perine, Fort Worth	7,677.00	6,371.91
Meridian Pet. Corp. of Texas, Tulsa, Okla.	28,647.37	23,353.04
Messinger, C. S., et al, Fort Stockton	6,030.36	1,356.83
M. & G. Oil Co., Overton (12-31-31)	24,913.11	17,922.24
Mid-Kansas Oil & Gas Co., Findlay, Ohio	2,908,424.20	1,579,782.48
Mid-Texas Pet. Co., Breckenridge	3,696.39	2,964.73
Mid-Continent Pet. Corp., Tulsa, Okla.	13,158.01	10,477.67
Mills & Garitty, Corsicana	2,555.04	1,533.30
Miller, Paul L., Kilgore	26,818.18	22,259.14
Milham Corp. of Texas, Dallas	1,110.06	932.45
Mills Bennett Prod. Co., Houston	504,578.50	376,092.85
Millikin, L. L., Burkburnett	299.83	212.98
Minnesota East Texas Oil Co., Duluth, Minn. (12-31-31)	668.30	554.69
Minntex Oil Corp., Wichita Falls	610.52	336.88
Minor Oil Co., Beaumont	5,680.21	3,976.15
Minnesota East Texas Oil Co., Duluth, Minn.	7,542.14	6,259.97
Mitcham, G. P., Dallas (12-31-31)	7,358.31	5,444.12
Mitcham, G. P., Dallas	24,659.18	19,480.15
Mitchell, Frank A., Wichita Falls	1,558.08	1,237.77
Montgomery-Rea-Montgomery, Sedwick	808.21	654.64
Mount & Lee, Inc., Wichita Falls	1,270.54	998.76
Moutray Oil Co., Abilene	5,014.96	3,325.98
Moore, G. N., and Henry Zwiefel, receivers for Cosden Oil Co., Fort Worth	204,989.69	114,695.98
Moore, N. A., Eastland	501.68	352.03
Moody Corp., Houston	381,308.39	231,177.92
Moore, E. H., Tulsa, Okla.	4,206.60	3,491.46
Moore, R. A., receiver for Rex Pet. Corp., Orange	4,227.10	2,958.98
Moody-Seagraves Prod. Co., Houston (12-31-31)	219,009.42	159,747.98
Moody-Seagraves Prod. Co., Houston	176,067.28	138,415.21
Mook-Texas Oil Co., Fort Worth	24,522.15	20,187.87
Moran, E. J., Dallas	6,045.99	5,018.17
Mordyan Pet. Co., Pampa	11,718.60	8,434.72
Morgan, Ray, et al, Fort Worth	577.43	483.39
Morgan, J. H., et al, Longview	5,443.13	4,517.89
Moran, J. J., et al, Wichita Falls	3,928.33	2,716.14
Moran Co., The, Wichita Falls	6,479.76	5,126.60
Morton, A. D., Tulsa, Okla.	6,790.62	5,636.21
Moss, H. S., Sp., Dallas	8,712.90	7,231.70
Moss, H. S., Dallas	25,133.72	20,781.47
Moss & Urschel, Dallas	21,458.27	17,394.55
Moss, Urshel & Keys, Dallas	3,132.32	2,372.75
Mosses, E. J., Luling (12-31-31)	707.97	370.85
Moszie Oil Co., Eastland (12-31-31)	961.22	664.00
Mudge Oil Co. of Texas, Pittsburgh, Pa.	49,116.92	40,767.04
Mues & MacDermott, Fort Worth	331.68	265.76
Mullendore, Berry & Berry, Cleveland, Okla.	54,338.59	45,101.02
Mullendore, Berry & Berry, Cleveland, Okla. (12-31-31)	23,853.47	18,614.00
Murchison Oil Co., Dallas	49,044.67	30,280.46
Murphy, O. G., trustee, El Dorado, Ark.	13,188.18	10,946.19
Murphy, J. F., trustee, Sapulpa, Okla.	6,134.29	5,091.45
Murphy, J. F., trustee, Sapulpa, Okla.	2,991.36	2,482.92
Murchison & Cranfill, Wichita Falls	1,062.13	902.80
Murphy, J. F., trustee, Sapulpa, Okla. (12-31-31)	11,850.65	9,061.24
Murphy, J. F., trustee, Sapulpa, Okla. (12-31-31)	13,126.38	10,075.03
Murphy, Q. C., et al, Marshall	7,856.56	6,520.94
N		
National Securities Oil Co., Dallas	8,903.30	7,389.73
National Oil & Grease Co., Dallas	17,081.34	14,177.51
Navarro Oil Co., Houston	193,570.16	153,928.31
Nelson, James L., and Roy L. Pace, Dallas (12-31-31)	1,917.49	1,244.22
Neversuch Oil Co., Mexia	5,761.75	4,897.44
Newton & Lillie, Goose Creek	15,649.98	10,828.98
Newton-Palmer Oil Co., Rockdale	224.30	136.98
Newport & Ohio Pet. Co., Newport, N. Y.	395.72	325.27
Newblock-Holmes, Moore lease, Amarillo	2,240.15	1,635.31
Noack Oil Co., Rockdale	859.17	505.97
North Fork Oil Co., Amarillo (12-31-31)	400.12	280.11
North Fork Oil Co., Amarillo	3,786.59	2,643.26
Northern Oil Co., Amarillo	6,317.00	4,511.41
Noack & Lanning, Rockdale	75.08	45.05
Noack & Lanning, Rockdale	311.84	187.11
Noack & Lanning, Rockdale	235.00	133.23

Name and address—	Barrels	Value
Noack & Lanning, Rockdale	140.76	81.64
Noack & Lanning, Rockdale	559.56	442.34
North Fork Oil Co., Amarillo (9-30-31)	1,198.47	485.47
North Fork Oil Co., Amarillo (12-31-31)	2,750.54	1,797.89
No. Nine Oil Corp., Tulsa, Okla.	1,926.00	1,556.91
Nutt & Gates, Wichita Falls	3,047.84	3,590.67
Natl. Securities Oil Co., J. F. Lucey, Rec. (12-31-31)	11,396.14	6,686.43
Nabob Oil & Gas Co., Amarillo	18,334.75	12,141.50
Nash & Windfohr Oil Corp., Graham	53,355.32	43,106.12
Nash & Windfohr & Perry, Austin	33,658.12	20,195.47
Natl. Secs. Oil Co., J. F. Lucey, Rec., Dallas (9-30-31)	5,984.70	1,544.19
National Oil Co., San Antonio	426.99	256.43
O		
O.A.C.O., Laredo	1,196.00	1,071.24
Oasis Oil Co., Wichita Falls	103.61	83.01
O'Brien, W., Amarillo (12-31-31)	565.85	333.33
O'Brien, W., Amarillo	596.80	357.64
O'Donnell, J. E., Long Beach, Calif.	6,171.20	5,122.10
O'Connell Oil & Dev. Co., John F., Boston, Mass.	6,298.00	5,227.34
Octagon Oil Co., Tulsa, Okla.	6,909.13	5,734.58
O'Hern, John J., Laredo	19,770.00	16,409.10
Oils, Inc., Oklahoma City, Okla.	13,356.42	11,085.81
Oil Investment Co., Wichita Falls	845.95	678.99
Olsan Bros., Henderson (6-30-31)	123,501.31	41,842.36
Olney Oil & Ref. Co., Wichita Falls	168.20	126.15
Olsan Pet. Co., Bristow, Okla.	11,797.61	7,572.78
Olvey, J. W., & Clark Sample, El Dorado, Ark.	48,389.97	40,163.65
O'Neil & Wallace, Tyler	6,356.44	5,275.83
O'Neil, I. F., Tyler	5,859.35	4,863.36
Oriental Oil Co., Dallas	9,707.68	7,973.57
Orange Pet. Corp., Orangefield	23,677.26	15,574.09
Owen, John, Tr., Tyler	4,320.27	3,575.83
Owen-Sloan Oil Co., Tulsa, Okla.	46,553.15	23,276.58
Owenwood Pool No. 3, J. W. Robins, Tr., Fort Worth	24,411.58	20,085.02
Owens, Sherwood B., Brownwood	772.40	639.30
Owens, Sherwood B., Brownwood (12-31-31)	1,320.91	1,099.05
O.W.R. Oil Co., Ins., Dallas (12-31-31)	31,928.22	25,279.62
O.W.R. Oil Co., Inc., Dallas (9-30-31)	7,619.37	4,449.01
O.W.R. Oil Co., Inc., Dallas (9-30-31)	18,390.49	3,678.09
P		
Pace, Geo. L., Dallas (6-30-31)	19,109.66	6,438.07
Pace, Geo. L., Dallas (9-30-31)	42,319.61	13,689.25
Pace, Geo. L., Dallas (-12-31-31)	17,449.35	13,437.92
Pace, Geo. L., Dallas (3-31-31)	13,276.17	9,954.81
Pace, Geo. L., Dallas	11,627.95	9,580.10
Pace & Ward, Breckenridge	433.12	356.16
Palm, F. N., et al, Albany (12-31-31)	706.00	436.64
Palmer & Burch, Inc., Wichita Falls	4,255.83	3,506.55
Palm City Oil Co., McAllen	238.34	178.75
Palm, F. B., et al, Moran	531.03	359.84
Palmer Oil Co., Freddie, Rockdale	76.88	39.02
Pampa Prod. Co., Pampa (12-31-31)	17,119.58	8,878.80
Pampa Prod. Co., Pampa	2,903.96	2,119.89
Panhandle & Santa Fe Ry. Co., Wichita, Kans.	4,016.36	2,008.18
Panhandle Refining Co., Wichita Falls	80,262.07	64,081.25
Paraffine Oil Co., Houston	10,682.83	7,477.96
Preston, W. M., Rec., Patterson Drilling Co., Dallas	6,243.43	3,461.22
Preston, W. M., Rec., Patterson Drilling Co., Dallas (12-31-31)	10,561.45	5,625.41
Pearson Oil Co., San Antonio (12-31-31)	331.66	272.80
Pearson Oil Co., San Antonio	50.88	48.00
Peery, Thos. H., Wichita Falls	12,487.47	10,450.32
Pelican Natl. Gas Co., Inc., Shreveport, La.	26,306.57	21,834.44
Pemeta Oil Co., Fort Worth	2,761.72	2,264.74
Pennowa Oil & Gas Co., Skiatook, Okla.	7,417.16	4,980.13
Penn Oil Co., Dallas	9,013.74	4,934.00
Perkins, R. W., Dallas (12-31-31)	13,081.69	15,007.80
Perkins & Callum, Wichita Falls	72,274.30	57,883.60
Pet. Finance Corp. of Texas, Longview	45,812.30	38,024.22
Petroleum Producers Co., Wichita Falls	80,330.21	65,496.32
Petroleum Marketing Corp., Houston	54,846.19	45,622.00
Perkins & Snider Lease, Wichita Falls	3,714.29	3,129.13
Permian Oil Co. & Gibson & Johnson, Inc., Fort Worth (12-31-31)	2,177.88	1,724.66
Permian Oil Co. & Gibson & Johnson, Inc., Fort Worth	2,184.39	1,856.72
Perren & Fell, Dallas	13,409.73	11,130.07
Perry, C. Edmund, Shreveport, La.	13,709.00	11,378.79
Petroleum Investment Co., Wichita Falls (12-31-31)	2,607.62	2,079.76
Pettit Oil Corp., Trees, La.	612.20	520.37
Peyton Bros., Mexia	6,821.45	5,744.80
Philmack Oil Co., Tyler	7,554.60	6,270.32
Philp Bros., Beaumont	2,769.43	1,938.50
Phillips & Bennett, Mexia	3,764.74	3,124.72
Phillips, B. F., Gladewater (12-31-31)	11,889.23	9,732.92
Phillips, B. F., Gladewater	13,006.43	10,795.39
Phillips Pet. Co., Bartlesville, Okla. (Archer County)	9,022.66	7,669.26
Phillips Pet. Co., Bartlesville, Okla. (Gray County)	195,539.33	135,149.46
Phillips Pet. Co., Bartlesville, Okla. (Boore County)	1,331.60	792.36
Phillips Pet. Co., Bartlesville, Okla. (Hutchinson County)	420,920.57	259,976.04
Phillips Pet. Co., Bartlesville, Okla. (Carson County)	2,027.90	1,480.36
Phillips Pet. Co., Bartlesville, Okla. (Brown County)	4,689.41	3,983.48
Phillips Pet. Co., Bartlesville, Okla. (Callahan County)	1,171.12	995.46
Phillips Pet. Co., Bartlesville, Okla. (Eastand County)	3,853.14	3,172.52
Phillips Pet. Co., Bartlesville, Okla. (Shackelford County)	15,462.97	12,908.39
Phillips Pet. Co. (Stephens County)	4,299.72	3,543.04
Phillips Pet. Co. (Young County)	13,709.59	11,643.14
Phillips Pet. Co. (Wichita County)	846.96	717.04
Phillips Pet. Co. (Jones County)	24,785.20	20,904.59
Phillips Pet. Co. (Wilbarger County)	131,625.38	101,624.13
Phillips Pet. Co. (Pecos County)	63,669.47	31,834.79
Phillips Pet. Co. (Crane County)	23,344.90	11,672.52
Phillips Pet. Co. (Refugio County)	33,341.67	27,065.57
Phillips Pet. Co. (Loving County)	21,162.85	10,581.44
Phillips Pet. Co. (Upton County)	6,774.88	3,387.46
Phillips Pet. Co. (Winkler County)	60,788.40	30,394.30
Phillips Pet. Co. (Wilbarger County) (12-31-31)	10,254.34	6,709.27
Pilot Oil Co., Dallas (12-31-31)	152,887.97	116,995.52
Pilot Oil Co., Dallas	99,908.86	82,924.37
Piner, R. T., Fort Worth	160.00	135.25
Pine Grove Oil Co., Tyler	1,440.10	1,198.60
Pinto Oil Co., Mineral Wells	55.28	30.95
Piney Oil & Gas Co., New York, N. Y.	2,863.47	1,671.32
Pioneer Oil, Gas & Ref. Co., Somerset	857.80	563.93
Piper, L. E., Tr., Vernon	1,399.02	1,177.44
Pittman Oil Corp., Fort Worth	22,146.00	18,381.00
Pitzer & West, Breckenridge	19,583.92	16,434.21
Pivoto, M. E., Sour Lake	2,893.09	2,025.19
Plummer, Albert, Houston	15,687.32	13,020.48
Plymouth Oil Co., Pittsburgh, Pa.	61,435.91	20,717.96
Paggi & Co., Chas., Beaumont	417.68	252.37
Paggi Bros. Oil Co., Beaumont	6,407.21	4,485.04
Pointer Oil Co., Waco	14,325.00	11,890.27
Pois, Fine & Schulz, Wichita Falls	554.73	458.33
Pois, M., et al, Wichita Falls	2,980.33	2,518.94
Pollard, Jim, Pasadena, Calif. (6-30-31)	90,391.81	22,597.96
Pollard, Jim, Pasadena, Calif. (9-30-31)	75,965.56	22,830.13
Pollard, W. E. & C. E., Pampa	3,745.60	2,733.49
Pope, Ernest, Saratoga	262.26	182.58
Poole, B. O., Batson	1,233.74	863.62
Portland Drilling Corp., Wichita Falls	470.89	384.84
Portland Drlg. Corp., Wichita Falls (12-31-31)	1,599.42	941.85
Porterfield, R. R., Overton	2,824.01	2,240.68
Powell, H. J., Tr., San Antonio (12-31-31)	1,986.91	1,151.42
Powell & Irion, Inc., Gladewater	13,431.60	11,017.55
Powell, J. L., Est., Wichita Falls	263.37	218.58
Powers Production Co., Houston	26,954.47	18,063.54
Prairie Oil & Gas Co., Independence, Kans.	740,762.03	518,611.52

Name and address—	Barrels	Value
Pratt, D. C., Mineral Wells	2,024.00	1,599.66
Pratt, Thos. H., Brenham	213.00	157.80
Premier Oil Corp., Tyler (12-31-31)	31,446.74	24,355.30
Price-Russell & Co., Ranger	2,661.50	2,252.14
Prince Bros. Drilling Co., Electra	6,395.29	5,368.11
Priest Drilling Co., L. G., Fort Worth (12-31-31)	933.24	774.59
Primrose Refining Co., Wichita Falls	2,110.03	1,790.27
Prine, J. C., Mobile, Ala. (12-31-31)	6,721.21	5,578.60
Prine, J. C., Mobile, Ala.	6,885.47	5,714.35
Proctor, George, Wichita Falls	10,965.30	9,217.50
Producers Drilling Co., Wichita Falls	932.98	746.86
Producers Supply & Tool Co., Marietta, Ohio	16,794.66	13,944.99
Producers & Refiners Corp., Independence, Kans.	3,789.11	3,010.62
Producers Oil Co., Tulsa, Okla.	25,348.23	18,564.21
Production Purchasing Co. of Texas, Fort Worth (12-31-31)	1,626.66	1,361.91
Production Purchasing Co. of Texas, Fort Worth (Sheppard Lease) (12-31-31)	5,061.90	4,201.38
Producers Investment Corp., Dallas (12-31-31)	18,500.99	13,693.51
Producers Investment Corp., Dallas (12-31-31)	9,461.95	7,427.17
Producers Investment Corp., Dallas (6-30-31)	887.88	603.76
Pruitt & Miles, Gladewater (12-31-31)	10,212.53	7,882.52
Pruett, Nelson, et al, Luling	12,979.45	10,772.94
Pugh-Hickman Drilling Co., Inc., Shreveport, La.	27,294.22	22,654.19
Pure Oil Co., Chicago, Ill.	3,423,973.61	2,488,378.02
Pure Oil Co., Chicago, Ill.	729,480.38	527,613.98
Pursel, Carl, for Darby Lynde Coz, Tulsa, Okla.	11,417.71	9,174.25
Putnam Supply Co. & McGee, Albany (12-31-31)	357.56	247.42
Putnam Supply Co. & McGee, Albany	280.62	210.47
Putnam Oil Co., Tulsa, Okla.	20,834.08	16,144.64
Py-Tex Oil Co., Winchester, Ky.	319.65	271.68
Q		
Quinan, H. W., Central Point, Ore.	490.49	340.48
Quincy Oil Co., Vernon	136.50	117.15
Quick Sand Oil Co., Borger	15,079.00	11,007.67
R		
Rajo Oil Corp., Fort Worth (supplemental)	217.13	180.22
Rajo Oil Corp., Fort Worth	4,995.67	4,146.40
Ramsel Oil Co., W. T., Rockdale	1,057.82	754.30
Ramming, R. W., Wichita Falls	108.36	80.61
Ramming, R. W., Wichita Falls (12-31-31)	93.75	72.62
Ramming, Staley & Ramming, Wichita Falls	333.00	269.73
Ramming, W. F., Wichita Falls	83.69	71.14
Randado Oil Corp., Oklahoma City, Okla. (12-31-31)	10,828.63	7,561.27
Randall Oil Corp. of Texas, W. S., Tyler	4,383.30	3,513.81
Randall, W. S., et al, Oklahoma City, Okla.	1,860.56	1,556.40
Ranell Oil Co., Oklahoma City, Okla.	2,302.65	1,800.17
Rancho Oil Co., Fort Worth	44,930.05	36,886.56
Rathke Oil Co., Wichita Falls	15,195.96	12,741.77
Ray, George B., Tyler	10,843.70	8,922.34
Ray & Miller, Dallas	7,053.05	5,854.03
Reclamation Co., Fort Worth	3,336.23	2,569.24
Rector & Davidson, Dallas	7,902.81	6,558.33
Red Star Oil Co., McAlester, Okla.	32,668.84	27,339.10
Red River Oil Co., Tulsa, Okla.	18,526.08	15,076.44
Redick & Fugus Oil Co., Tyler	7,300.61	6,059.51
Reed, W. M., Breckenridge	838.98	692.86
Reed, Crenshaw & Glass, Nowata, Okla.	6,484.50	5,305.58
Reeder & Scarborough, Wichita Falls	1,846.15	1,554.26
Reese, J. C., Gladewater	5,176.00	4,296.08
Reed, Crenshaw & Glass, Nowata, Okla.	7,414.99	5,705.16
Refugio Oil Corp., Houston	8,041.23	6,601.98
Reeves, Riley & Reeves, Gouldbusk	93.00	74.75
Regan, J. T., Rising Star	1,181.69	940.27
Reinhart, M. J., Tr., Oklahoma City, Okla.	322.38	261.13
Reno Oil Co., Sistersville, W. Va.	36,823.44	30,776.06
Rentex Oil Co., San Antonio	6,151.72	4,044.97
Republic Production Co., Houston	455,146.81	322,281.62
Republic Supply Co., Houston	13,424.59	9,594.54
Reserve Petroleum Co. of Texas, Tulsa, Okla.	13,609.97	11,296.27
Retsal Drilling Co., Inc., Henderson	14,524.30	12,055.15
Rex-Tex Oil Co., Winchester, Ky.	319.66	271.68
Smith, Rex D., Burkburnett	386.29	306.65
Reynolds, Roy A., Fort Worth	2,191.24	1,818.73
Rhodes A. Highers, Breckenridge	4,926.86	4,045.17
Rhodes, Highers & Christi, Breckenridge	209.89	150.44
Ribble, O. C., South Bend (12-31-31)	257.93	199.19
Ribble, O. C., South Bend	347.00	262.96
Richardson & Kelsey, Fort Worth	41,483.25	20,741.65
Richardson, A. F., Tyler (12-31-31)	3,314.77	2,751.26
Richmond Drilling Co., Seguin	2,472.71	1,545.44
Riggs, E. R., Graham	22,081.57	18,580.41
Right of Way Oil Co., Fort Worth	560.43	431.52
Rimmer & Hamilton, Longview	6,608.86	5,485.36
Risinger, M., Mansfield, La.	7,732.53	6,418.01
Rio Bravo Oil Co., Houston	278,319.24	205,945.14
Riner & Bailey, Wichita Falls	17,533.71	14,705.41
Riner & Omohundro, Wichita Falls	7,278.44	5,063.44
Riner, Roy L., Wichita Falls	8,076.60	6,703.58
Risinger, M., Mansfield, La. (12-31-31)	2,542.00	2,100.62
Rixford, S. J., et al, Ward County (12-31-31)	4,297.50	2,083.06
Rixford, S. J., et al, Grand Falls	2,459.00	1,229.51
R.M.V. Oil Co., Henderson	45,198.83	37,515.03
Robertson Drilling Co., Fort Worth	6,233.65	5,173.93
Roberts, H. W., Wichita Falls (12-31-31)	1,280.64	1,002.28
Roberts & Roscie, Henderson (12-31-31)	22,071.21	16,996.06
Robinson, J. B., Sour Lake	219.73	153.80
Roberts-Roscoe, Henderson	17,599.93	11,967.95
Robertson, R. R., Wichita Falls	3,033.44	2,333.67
Roberts Production Co., J. T., Longview	7,937.47	6,588.10
Robinson, O. D., Pittsburgh, Pa.	963.34	749.30
Robinson, Arthur D., Dallas	12,663.61	9,878.57
Rockwood Oil Co., McAlester, Okla.	6,892.46	5,765.92
Rockdale Junior Oil Co., Rockdale	71.17	41.28
Rogers, Dan D., Dallas	4,993.72	4,144.77
Roeser & Pendleton, Inc., Fort Worth	392,772.17	328,335.27
Rock Creek Oil Corp., Amarillo	5,280.00	2,423.76
Root, Rhodes, Gilman & McMurray, Eastland	3,483.00	2,954.00
Root & Rhodes, Eastland	8,793.00	7,267.00
Root, C. M., Eastland	4,575.00	3,728.00
Root & Fehl, Eastland	1,187.00	910.00
Rose Tex Oil Co., Rosenberg	906.06	634.24
Ross, Dwight M., Wichita Falls	1,120.23	952.20
Roth & Faurot Oil & Gas Co., Independence, Kans.	2,770.79	2,353.64
Rountree & Caudle, Rockdale	320.95	192.57
Royal Petroleum Corp., Dallas	7,422.52	6,160.69
Rowan & Nichols Oil Co., Fort Worth	22,645.86	18,796.05
Rowan & Bristow, San Antonio	8,221.80	6,824.09
Rowe, J. G., Wichita Falls	3,245.16	2,623.26
Royal Petroleum Corp., Dallas (9-30-31)	8,490.57	3,831.06
Royal Petroleum Corp., Dallas (12-31-31)	10,861.32	8,166.21
Royal Petroleum Corp., Dallas (9-30-30)	4,940.52	984.10
Rubsom & Hunter, Wichita Falls	3,843.87	3,113.14
Rudman, I., Longview (12-31-31)	8,667.97	7,012.16
Rudman, I., Longview	6,581.87	5,462.95
Russak, Dan, Longview (12-31-31)	6,014.43	4,991.96
Ruston Drilling Co., Inc., Ruston, La. (12-31-31)	16,127.53	12,643.42
Ruston Drilling Co., Inc., Ruston, La.	15,422.05	12,801.04
Russell, Frank, Oklahoma City, Okla.	8,644.16	7,174.65
Rushing, Dr. J. S., Longview	28,588.46	23,728.42
Russak, D., Longview	7,044.03	5,846.53
Russell & Wilson, Wichita Falls	5,246.90	4,256.66
Ruthada Oil Co., for R. L. Sturm, Ardmore, Okla.	5,265.17	3,948.86
Ruthada Oil Co., Oklahoma City, Okla.	11,686.82	8,821.55
Rutherford, Pat, Rec., Refugio	23,461.61	17,364.26
Ruyie Farm & Oil Co., Wichita Falls	5,630.10	4,552.29
Ryan Consolidated Petroleum Corp., Tulsa, Okla.	44,447.86	32,233.03

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Name and address—	Barrels	Value
Sabinas Oil Corp., Longview	104,905.01	87,071.98
Saigh, N. A., San Antonio	666.94	456.70
Sakaba Oil Corp., Inc., Shreveport, La.	32,825.23	27,244.93
Salada Oil Co., San Antonio	1,330.72	904.93
Salmon Oil Co., Dallas	6,525.00	5,415.75
Sampson, H. G., Fort Worth (12-31-31)	5,483.34	4,551.17
Sampson, H. G., Fort Worth	7,695.67	6,387.40
Sandefer-Atkinson-Daniel Oil Corp., Breckenridge	1,769.28	1,438.07
Sanford Co., Inc., Tyler	7,602.00	6,309.66
Saratoga Oil Co., Wichita Falls	598.45	507.08
Satellite Oil Co., Tulsa, Okla.	22,739.61	18,873.87
Savoy Oil Co., Tulsa	9,417.07	4,708.53
Saxet Oil Co., Houston (12-31-31) (16 months; ave. $1.0816)	56,892.63	61,478.59
Saxet Oil Co., Houston	166,243.36	123,514.86
Sawyer, W. G., Brownwood	1,597.22	1,357.65
Saxet Oil Co., Houston (12-31-31)	204,457.63	145,001.56
Sayre Oil Co., Wilmette, Ill. (12-31-31)	4,610.76	3,826.94
Sayre Oil Co., Wilmette, Ill.	38,899.60	37,752.22
Scarborough, W. A., Burkburnett	1,160.97	875.55
Schroeder, T. S., Dallas	14,439.00	11,439.00
Schermerhorn-Winton Co., Tulsa, Okla.	51,462.87	25,731.44
Schermerhorn Oil Co., Tulsa, Okla.	94,057.86	47,101.86
Schuls & Weaver, Wichita Falls	11,972.97	9,933.19
Schaffner, E. N., et al, Cross Plains	511.68	333.35
Schlaffke & Blair, Electra	9,865.28	8,371.70
Schmitt, A. H. and S. P., Fort Worth	10,179.41	8,642.96
Schroeder, T. S., Dallas (12-31-31)	10,046.00	8,266.28
Schroeder, T. S., Dallas	2,512.00	1,808.25
Schaffner-Wilson, Cross Plains	1,123.16	954.67
Schoolfield, R. E., Wichita Falls	150.43	119.01
Sec. 92 Production Acct., Pecos	5,379.57	2,669.70
Scott & Walker, Albany	1,673.08	1,331.17
Scott & Name, Graham	1,583.91	1,321.62
Scott & Britton, Graham	95.72	73.70
Sedgwick Oil & Gas Co., Wichita Falls	446.77	379.76
Sedwick Oil Co., Tulsa, Okla.	2,901.97	2,193.20
Sedwick & Webb, Albany	263.52	197.64
Seitz, Comegys & Seitz, Inc., Wichita Falls	2,489.64	2,109.96
Sells Pet., Inc., Tyler (supplemental) (12-31-31)	7,700.54	6,196.62
Sells Petroleum, Inc., Tyler	22,135.03	18,372.06
Selby Oil & Gas Co., Tulsa, Okla.	96,444.66	80,118.41
Senter, E. G., Jr., Dallas	135.00	117.80
Sequoia Oil Co., Fort Worth	9,320.46	4,558.62
Sessions, W. L. & Q. L., Tyler	4,879.55	4,050.02
Sessions, L. P., Rockdale	346.51	207.91
Seybert Bros., Mooringsport, La.	3,459.12	2,940.26
Shaffer, J. C. & Margaret L., Coleman	4,768.60	3,335.21
Shankle Newton Oil & Gas Co., Inc., Laredo	32,893.35	24,670.01
Shankle, Mrs. H. C., Laredo (12-31-31)	1,486.10	1,114.60
Shamrock Oil & Gas Co., Amarillo	149,433.69	95,049.12
Shano Oil Co., Longview (12-31-31)	6,736.18	5,591.03
Shano Oil Co., Longview	20,594.25	17,093.23
Shappell Oil Co., Wichita Falls	27,236.04	22,650.61
Shasta Oil Co., Longview	50,768.19	42,119.50
Shaw Oil Co., Dallas	61,818.45	48,519.12
Sheffield Oil Co., Houston	2,685.67	1,879.97
Shell Petroleum Corp., St. Louis, Mo.	5,237,793.02	3,746,942.32
Sherman Oil & Gas Co., Sherman	1,149.88	640.26
Shiloh Oil Co., A. L. Brin, Tr., Dallas	3,766.25	3,126.99
Shoreline Oil Co., Mount Pleasant	7,369.49	6,116.67
Showalter, Russell & Trentman Oil Corp., Fort Worth	6,360.84	5,279.50
Showers, E. A., & W. A. Moncrief, Longview	2,607.17	2,163.95
Showers, E. A., & W. A. Moncrief, Longview (12-31-31)	23,167.81	19,081.02
Sikes, Louis, Tyler	21,775.65	18,073.80
Silver Star Oil Co., McAlester, Okla.	1,312.69	1,170.89
Simplex Oil Co., Inc., Shreveport, La.	9,303.00	7,723.49
Simpson, O. H., Fort Worth	535.58	444.92
Simms Oil Co., Dallas	629,220.76	368,134.34
Simpson-Fell Oil Co. et al, Ardmore, Okla.	6,061.07	4,580.45
Simpson, O. H., Fort Worth (12-31-31)	718.36	559.07
Simmons, T. K., Tulsa, Okla.	1,464.02	1,159.66
Simplex Oil Co., Inc., Shreveport, La. (12-31-31)	2,175.13	1,805.36
Sinclair Oil & Gas Co., Tulsa, Okla.	1,260,169.42	1,043,360.07
Sinclair Oil & Gas Co., Houston	203,696.83	148,884.31
Jack Sink, Corsicana	114.00	93.00
Sipe Springs Oil Co., Tulsa, Okla.	2,360.73	1,918.08
Sircovich, A., & Mrs. F. M. Thomas, Putnam	420.21	256.33
Skiatex Pet. Co., Amarillo	17,963.09	12,092.03
Skelly Oil Co., Tulsa, Okla.	429,683.61	269,600.37
Skinner, Oil Co., E. W., Saratoga	3,175.04	2,222.54
Skipper Oil Co., B. A., Longview	6,557.54	5,442.93
Skipper-Bivins Oil Co., Inc., Longview	8,610.52	7,146.73
Slick-Seeligson, Inc., Oklahoma City	43,541.42	39,388.18
Slicker, Homer, Cisco	579.05	442.58
Smith, W. Claude, San Antonio	2,378.68	1,879.05
Smith, C. R., et al, Grand Falls (12-31-31)	3,407.08	1,014.84
Smith, Rex D., Burkburnett	386.29	306.65
Smith, C. R., et al, Grand Falls (6-30-31)	5,643.62	1,487.42
Smith, H. R., Inc., Luling	38,074.59	31,601.90
Smith Oil Co. ,Inc., E. L., Mexia	97,109.18	66,251.42
Smith Properties, J. R., M. O. Swallow, Rec.	12,321.40	10,236.76
Smith, Mrs. James L., Amarillo	3,388.45	2,233.24
Smith & Son., M. T., Longview	3,180.00	2,639.40
Smith, Levi, et al, Texon	6,760.16	5,746.15
Smith-Bohlesen Oil Co., Houston (12-31-31)	6,498.78	5,393.98
Smith & McDannald, Electra	15,788.98	10,707.20
Smith, McIntosh & Thomas, Cameron	457.20	271.28
Smith, McIntosh & Thomas, Cameron (12-31-31)	448.87	206.97
Smith & Torrans, Tyler	17,072.19	14,169.92
Smith & Ash, Wichita, Kans.	23,392.73	17,061.09
Smith Salvage Co., Houston	919.83	643.88
Smith, McIntosh & Thomas, Cameron	828.76	433.31
Sneed Bros., Tulsa, Okla.	14,386.60	11,940.87
Sneed Bros., Tyler (12-31-31)	13,396.20	9,902.63
Snowden & McSweeney Co., New York, N. Y.	108,173.73	88,614.39
Snyder, W. C., et al, Tyler (12-31-31)	3,743.60	3,107.18
Somerset Crude Oil & Ref. Co., Somerset	2,270.26	1,412.13
Somerset Oil Co., Somerset	774.84	477.83
Sonbar Corp., El Dorado, Ark.	21,331.31	17,704.98
South Shore Oil Co., Houston	3,899.73	3,082.24
South Texas Pet. Co., Houston	57,306.78	49,207.04
South Oil Co., Rosston, Ark.	37.64	27.48
Southwest Royalty Co., Wichita Falls	4,274.20	3,276.65
Southern Drilling & Prod. Co., Bay City	4,310.70	3,319.24
Southern Oil & Prod. Co., Eastland	1,087.49	848.33
Southern Petroleum Exploration, Inc., Sistersville, W. Va.	36,628.34	26,673.55
Southern Petroleum Corp., Houston	2,541.01	1,870.89
Southern Production Corp., El Dorado, Ark.	14,736.07	12,230.94
Spandaco Oil & Royalty Corp., Dallas	34,175.84	28,165.31
Speed, C. D., Corsicana	170.91	138.44
Spencer, H. E., Tr., St. Louis, Mo.	583.66	457.23
Spencer & Co., H. H., Burkburnett	156.00	132.60
Sprague Oil Co., Ardmore, Okla.	4,593.69	2,296.85
Spratt, F. D., et al, Fort Worth	6,376.82	5,292.76
Spratt, F. D., et al, Fort Worth (12-31-31)	6,120.07	5,079.66
S.R.&C. Oil Corp., San Antonio	60,600.65	45,506.48
Staley, J. A., Wichita Falls	1,831.47	1,518.10
Stansylvania Oil & Gas Co., Amarillo	7,003.19	4,647.74
Stanolind Oil & Gas Co., Tulsa, Okla. (supplemental	50,840.25	34,194.49
Star Drilling Co., Wichita Falls	12,355.92	10,498.22
Stark, W. H., Orange	746.48	522.54
States Oil Corp., Eastland	35,846.15	28,317.10
Stantex Petroleum Co., Oklahoma City, Okla.	14,289.47	11,888.45
Starnes, C. R., et al, Gladewater	7,884.00	3,840.00
Starnes, C. R., et al, Gladewater	12,764.00	10,610.12
Stein, H., Ranger (12-31-31)	70.56	51.50
Stidham & Thrasher, Tyler	361.12	180.56
Stidham & Thrasher, Tyler	5,785.13	4,801.76
St. Marys Oil & Gas Co., St. Marys, W. Va.	31,861.21	21,143.12
Stanolind Oil & Gas Co., Tulsa, Okla.	2,486,891.04	1,529,451.07
Steen Drilling, Inc., Tyler	24,249.70	20,127.33
Stekoll, Harry, Tulsa, Okla.	22,179.33	15,044.92
Stephens Oil Co., Sour Lake	565.17	395.62
Stewart, W. E. (Stewart Holdings, Inc.), Tyler	7,976.28	6,620.31
Stock, H. L., Cisco	1,381.50	1,105.12
Storey-Frieble-Duffey Oil Co., Winston-Salem, N. C.	2,832.75	1,416.41
Storey-Frieble-Duffey Oil Co., Winston-Salem, N. C.	21,424.05	10,712.06
Storey-Friebel-Duffey Oil Co., Winston-Salem, N. S.	17,608.93	8,804.52
Stoops, J. P., Ranger	333.28	258.32
Stroube & Stroube, Corsicana	66,563.86	52,971.48
Stovall & Son, E. C., Graham	20,932.02	17,771.34
Strake Oil Corp., Houston	4,524.82	4,072.34
Stratton, Ed F., Pioneer	224.79	162.70
Strelsky, Joe, & Hefley, Rockdale	228.53	137.11
Sturm-Nolen Drilling Co., Grandfalls	11,674.28	5,837.14
Sturm-Nolen Drilling Co., Grandfalls (12-31-31)	6,787.87	3,101.89
Suloch Oil Co., Amarillo	2,181.32	1,592.36
Sullivan, M. J., & E. J. Franklin, Kansas City, Mo.	414.46	311.47
Summerfield Oil Co., Tulsa, Okla.	99.06	75.63
Summit Drilling Co., Tulsa, Okla.	9,313.00	7,730.35
Sunray Oil Co., C. H. Wright, Rec., Tulsa, Okla.	70,823.99	46,606.29
Sun Oil Co., Dallas	1,635,660.98	1,226,333.43
Supreme Oil Co., Orange	439.53	307.67
Superior Oil Co., Dallas	122,069.90	101,318.02
Syndicate Oil Corp., Rochester, N. Y.	101.54	86.30
Swanner, John L., Wichita Falls	902.07	730.65
Swearingen, W. B., Rec., Forest Oil Corp., Luling	4,033.84	2,420.31
Swearingen, W. R., et al, San Antonio	3,894.55	2,660.89
Swearingen Oil Co., San Antonio	2,742.13	1,806.03
S.&W. Oil Co., Amarillo	3,876.48	2,205.33

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Tannehill, L. B., Albany	22,161.70	17,978.06
Tarver, A. H., Shreveport, La.	74,921.98	27,710.66
Tarver, A. H., Shreveport, La.	15,702.26	13,032.88
Taubert & McKee, Tyler (12-31-31)	4,105.07	3,407.21
Taubert & McKee, Tyler	15,418.66	12,797.48
Taylor-Link Oil Co., Houston	42,465.20	21,594.13
Taylor-Sibley Synd., Dallas	1,892.34	1,407.37
Taxman Ref. Co., Inc., Wichita Falls	23,491.38	14,084.62
Tex Cal Oil Co., Brownwood	3,276.56	2,284.35
Teatsorth, L., et al, Eastland	925.16	765.64
Teddlie, J. E., Liberty	3,274.00	2,309.14
Teci Prod. Co., Sayre, Okla.	822.00	639.31
Texas Consolidated Oil Co., San Francisco, Calif.	6,127.61	5,071.62
Texas Gas Co., Houston	1,216.42	912.32
Texas Gulf Producing Co., Houston	760,265.33	551,678.43
Texas Gulf Producing Co., Houston (12-31-31)	780,013.75	534,636.89
Texas Fidelity Oil Corp., Louisville, Ky.	2,666.35	2,175.34
Tex-Jersey Oil Corp., Tyler	25,532.79	20,738.16
Texon Oil & Land Co. of Texas, Fort Worth	37,948.49	18,974.27
The Texas Company, Houston	2,985,860.52	2,206,890.98
Texas Trading Co., Tyler (12-31-31)	12,696.68	9,737.02
Texas Unity Oil Co., Houston	6,716.99	5,583.10
Texas Pacific Coal & Oil Co., Thurber	87,032.48	70,174.50
Texas Petroleum Co., San Antonio	25,618.38	14,927.82
Texacal Oil & Gas Co., Glendale, Calif.	129.91	100.99
Theis Oil Co., Sour Lake	2,706.44	1,894.61
Texas Pacific Coal & Oil Co., Thurber	220,838.37	151,628.38
Texas Petroleum Dev. Co., Cameron	2,796.60	1,677.96
Texnia Oil Co., Wichita Falls	6,672.00	5,537.76
Texokana Oil Co., Tyler (12-31-31)	11,339.33	8,614.58
Texota Corp., El Dorado, Ark.	13,884.73	11,524.32
Tegler, F. E., San Antonio	105.00	52.50
Thaxton, Nannis S., Ex., W. H. Thaxton Estate, Austin	219.92	176.53
Thall Oil Co., Beaumont	2,786.49	2,334.88
Thomas & Tarver, Inc., San Antonio	140,681.81	105,511.36
Thomas, Sam, Tr., Marshall	7,864.62	6,527.99
Thomas, J. A., Burkburnett	1,165.00	896.29
Thomasson, & Co., E. M., Inc., Denver, Colo (12-31-31)	286.44	220.91
Thomason & Fitzsimons, Shreveport, La.	7,594.40	6,303.35
Thompson, J. E., Humble	427.00	298.00
Thompson & Beene, Groesbeck	5,433.67	4,509.95
Thompson, R. E., Dallas	15,347.84	12,738.69
Thurlier, C. J., Iowa Park (12-31-31)	546.92	349.15
Timms, Evelyn T., Amarillo	4,377.27	2,954.43
Timms-Sutphen Oil Corp., Amarillo	549.46	334.61
Timms-Dietsch Oil Corp., Amarillo	3,702.26	2,517.50
Timms Oil Corp., L. W., Amarillo	3,405.94	2,316.00
Timms-Robinson Oil Corp., Amarillo	1,165.13	792.28
Timms-Fogarty Oil Corp., Amarillo	417.09	283.56
Tidnell, H. L., Tr., Graham	761.48	533.19
Tidal Oil Co., Tulsa, Okla.	869,788.00	692,565.53
Tidwell, R. V., Tr., Graham	2,862.66	2,340.16
Tilton, Elvin, et al, Houston	5,263.79	3,684.46
Timblin, W. E., Wichita Falls	107.06	90.99
Towns, M. K., Luling	9,189.72	5,513.85
Trans Coastal Oil Co., New Orleans, La. (12-31-31)	2,011.78	1,295.01
Trans-Texas Oil Co., Inc., Midland	3,656.11	1,828.08
Trapp, M. E., Oklahoma City, Okla.	5,068.08	4,206.51
Travelers Oil Co., Amarillo	9,769.64	6,475.31
Traylor-Rutherford Oil Corp., Refugio	19,925.91	14,944.44
Treat Oil & Gas Co., E. M., Pittsburgh, Pa.	718.83	538.14
Trevino Oil Corp., Laredo	25,446.95	19,085.19
Triangle Petroleum Corp., Fort Worth	518.17	430.92
Triangle Petroleum Corp., Fort Worth	2,651.32	2,253.64
Triangle Oil & Gas Co., Rockdale	533.64	320.17
Trico Oil Co., Dallas	46,589.04	38,669.14
Trimount Pet. Co., Shreveport, La.	4,261.60	3,567.04
Trinity Production Co., Wichita Falls	160.20	136.16
Trippiehorn, D. R., Pampa	7,851.85	5,709.66
Tucker Oil Co., Wichita Falls	60,991.07	46,171.79
Tucker, W. B., Dallas	14,573.68	12,096.15
Tulsa Oil Co., Wichita, Kans.	35,657.15	29,595.43
Turman Oil Co., Tulsa, Okla.	168,906.12	140,314.27
Turman, L. C., W. E. Allen, Rec., Fort Worth	64,307.23	37,859.89
Turner, W. F., Longview (12-31-31)	40,297.84	30,878.70
Turner, W. F., Longview	29,210.85	24,245.00
Turnbow, W. C., Tr., Longview (12-31-31)	12,335.05	9,216.97
Turnbow, W. C., Tr., Longview (12-31-31)	16,382.02	12,526.57

U

Unacre Oil Co., San Angelo	7,855.42	6,519.99
Underwood Drilling Co., Wichita Falls	1,434.09	1,199.90
Underwood Drilling Co., Wichita Falls	1,124.12	907.11
Underwood Drilling Co., Wichita Falls	1,622.46	1,314.17
Underwood Drilling Co., Wichita Falls	1,081.16	875.73
Underwood Drilling Co., Wichita Falls	1,034.67	827.16
Unice Oil Co., Sour Lake	2,096.57	1,691.19
Union Oil & Mining Co., Tulsa, Okla.	3,725.54	2,812.78
Union Oil Co. of Nevada, Los Angeles, Calif.	744.55	572.30
United Petroleum Co., Brownwood	268.25	195.32
United Production Corp., Houston (to 3-25-32)	625,011.66	507,826.04
United Producers Co., Wichita Falls	29,120.65	24,633.16
United North & South Development Co., San Antonio	93,704.30	56,222.58
United Oil Corp., Wichita Falls	5,830.91	4,906.97
Universal Oil, Gas & Mining Co., Inc., Shreveport, La. (12-31-31)	12,494.07	9,594.52
Unity Oil Co., Beaumont	11,212.95	7,812.12
Urban, Andrew, Abilene	662.00	397.20

Name and address—	Barrels	Value
Upchurch & Co., Tyler	16,360.65	13,579.34
Upland Oil Co. & Cady-Conner & Crenshaw, Tulsa, Okla.	7,481.47	5,101.09
Urban et al, Ranger	612.30	503.37
V		
Van Cleave Trust, Baltimore, Md.	313.40	240.21
Vaughn, G. H., Dallas	27,592.53	21,201.79
Vaughn, G. H., Dallas (9-30-31)	10,176.94	6,695.47
Vaughn, G. H., Dallas (12-31-31)	32,612.05	25,161.20
Vigil Oil & Gas Co., Wichita Falls	5,143.23	4,039.48
Vireca Corp., Houston	6,483.04	5,380.92
Vise, R. H., Dallas (12-31-31)	29,452.35	23,120.01
Vise, R. H., Dallas	18,054.01	14,984.75
Virginia Oil Assn., Inc., Fort Worth	1,787.08	1,516.15
Ventura Oil Co., Wichita Falls	7,336.02	6,088.90
W		
Waco Oil Co., Waco	189.50	54.75
Waggoner, E. P., & C. F. Kopp, Tyler	3,715.45	2,936.61
Waggoner Refining Co., Inc., Electra	70,385.59	55,178.63
Waggoner, W. T., Est. (W. T. Waggoner, Tr.), Fort Worth	841.13	651.93
Wahpoo Oil Co., Rockdale	693.01	415.80
Wainwright West Oils, Ltd., Henderson	6,991.00	5,802.53
Wainwright West Oils, Ltd., Henderson	14,804.00	12,287.00
Walker, A. C., Albany	1,448.69	1,195.44
Wallace, W. W., Cisco	791.56	609.50
Walton, W. D., et al, Henderson (12-31-31)	8,976.87	7,244.96
Warner Oil Co., Borger	3,672.96	2,643.92
Watson, R. J., Newcastle	3,124.61	2,512.94
Watson, Pansy F., Successor to Ferguson & Watson, Electra	735.50	623.82
Walton, Blair & Schlaffke, Electra	1,445.37	1,225.08
Walton, W. D., et al, Henderson	7,746.00	6,430.18
Ward Oil Corp., Ardmore, Okla.	245,768.37	171,603.28
Wormer, F. E. Van, Wichita Falls	4,002.34	3,342.75
Warner-Quinlan Co. of Texas, Houston	106,649.85	83,550.46
Washoma Pet. Co., Enid, Okla.	7,272.12	5,308.65
Watts, C. D., Moran	397.47	255.34
Weaver & Pola, Wichita Falls	1,122.42	914.53
Webb, J. R., Corsicana	204.44	162.43
Webb Oil Co., Humble	3,444.44	2,411.11
Webb, J. R., & J. H. Bryant, Corsicana	126.95	79.98
Webb, Luther, Vernon	3,938.90	3,111.73
Webster Oil & Gas Co., C. J., San Antonio	11,291.97	9,372.34
Welch, Charles, Margarett Oil Co., Albany	551.80	298.06
Weldon Oil Co., Saratoga	9,389.93	5,555.50
Wellington Oil Co., Ltd., Los Angeles, Calif.	13,716.62	11,384.79
Weaver-Crim Corp., Eastland	45,015.32	37,362.68
Weekley Oil Corp., Fort Worth	47,034.82	23,517.57
Wells & Gann Drilling Co., Tyler	21,540.80	17,878.89
Weller, H. J., Wichita Falls (12-31-31)	352.84	193.18
Weinert, H. H., Seguin	23,945.28	14,367.10
Wenta, L. H., Oil Divn., Ponca City, Okla.	14,552.96	12,078.96
Wersy, J. E., Longview	13,296.02	11,035.69
Westheimer & Daube, Ardmore, Okla.	48,071.35	39,879.25
West Florida Co., Bagdad, Fla.	6,764.24	5,614.32
West Texas Pet. Corp., San Angelo	21,615.81	10,807.95
Westbrook Oil Corp., Op. Acct., Fort Worth	41,661.10	20,839.83
West Production Co., Houston	9,997.81	7,729.56
Westbrook Prod. Co., R. A., Fort Worth	5,623.72	2,811.86
West, C. K., Breckenridge	959.62	769.27
Western States Royalties Co., Chicago, Ill.	22,711.82	18,850.83
Westexas Oil & Royalty Corp., Fort Worth	14,307.61	11,875.31
Whale Oil Corp. of Texas, Corsicana	13,012.85	10,800.67
Wheelock & Collins, Corsicana	55,105.86	45,709.23
Whittington, J. O., Longview	48,325.48	40,110.14
White, James H., Wichita Falls	2,652.55	2,218.02
Whitfield, B. V., Oklahoma City, Okla.	347.12	295.05
Whisenant, Herbert W., Rec., Dallas (12-31-31)	13,330.02	10,547.70
Whitehill Oil Corp., Tulsa, Okla.	4,903.18	4,126.38
Whittle-Kavanaugh Corp., Houston (9-30-31)	64,950.46	25,747.45
Whisenant, H. W., Rec., Dallas (John W. Hooser)	51,348.34	42,620.12
White, William B., & Assocs., Birmingham, Ala.	13,781.74	11,438.85
White & Duncan, Wichita Falls (12-31-31)	4,946.25	3,765.78
White & Duncan, Wichita Falls	4,872.31	3,956.23
Wichita Prod. Co., Wichita Falls	6,664.52	5,455.93
Wickliffe et al, C. C. McDonald, Rec., Longview	7,696.33	6,387.95
Wilbarger Oil Co., Wichita Falls	953.33	695.94
Wickliffe et al, C. C. McDonald, Rec., Longview (12-31-31)	10,116.87	7,868.75
Wilcox Oil & Gas Co. of Texas, H. F., Tulsa, Okla. (12-31-31)	11,306.52	8,887.21
Willis Oil Co., Rockdale	617.96	370.74
Weller, J. G., et al, Cross Plains	851.77	723.46
Wilder, Jack H., Rice	208.78	164.93
Wilcox Oil & Gas Co. of Texas, H. F., Tulsa, Okla	119,546.53	80,605.44
Wilkins, L. A., Burkburnett	4,268.93	3,287.08
Williford Co., Shreveport, La.	1,742.73	1,446.46
Williams, J. H., Somerset	339.00	138.24
Williams, Mrs. Corn B., Ex. Est. John H. Williams, Dallas	1,878.60	1,516.40
Wallace, Dr. Charles W., et al, Wichita Falls	32,643.17	27,346.99
Wilson & Swaim, Woodson	550.00	343.75
Wilson Drilling Co., Wichita Falls	7,111.75	5,811.19
Wilson, W. I., Wichita Falls	649.57	552.13
Wilson-Broach Co., Beaumont	10,445.50	7,311.86
Wilson Oil Co., Houston	12,772.53	8,940.77
Wilson & Brown, Kilgore	8,521.72	6,460.24
Wilson & Brown, Kilgore	1,603.87	1,331.21
Winston Oil Co., McAlester, Okla.	21,751.74	18,168.49
Winch & Billings, Laredo	51,699.40	38,774.55
Wise & Porterfield, Tyler	3,115.91	2,523.87
Wise & Jackson, Sapulpa, Okla.	6,605.95	5,247.37
Wise & Jackson, Sapulpa, Okla.	9,219.30	8,144.07
Wise & Jackson, Sapulpa, Okla. (12-31-31)	11,915.02	3,464.75
Witcher, W. C., et al, Wichita Falls	322.45	273.16
Witcher, Annie L., Gdn., Wichita Falls	2,255.35	1,948.28
Witherspoon, C. L., & Chiquita Oil Co., San Antonio	28,124.17	19,221.13
Witherspoon Oil Co., San Antonio	6,643.20	5,248.18
W. K. Oil & Gas Co., San Anotnio	664.45	418.76
Wo-Mac Oil Co., Wichita Falls	3,627.25	3,083.15
Woods, J. A., & Salome-Cooper Drilling Co., Wichita, Kans.	10,649.72	8,339.26
Woody, W. C., Wichita Falls	12,487.47	10,450.32
Wood, Benton, Lesh & McCall, Nocona	2,669.89	1,750.64
Wood Drilling Co., Clint, Breckenridge	5,171.34	4,292.21
Woodburn Oil Corp., Dallas	704.25	583.36
Woodruff Dev. Co., Inc., Cleveland, Ohio	552.00	366.82
Woodley Petroleum Co., Shreveport, La.	101,614.54	82,430.86
Woods & Bennett, Humble	5,090.80	3,555.94
Worth Oil Co., Wichita Falls	3,674.85	2,842.68
World Oil Co., Inc., Fort Worth	4,478.95	2,293.57
Worth Petroleum Co., Fort Worth	3,597.53	2,842.05
Wolfe, A. T., Wichita Falls	4,190.19	3,627.49
Wolf, D. L., Olney	4,987.96	3,883.60
Wolfe & Bradley, Houston	13,790.84	11,446.40
Wright, H. L., Rec. for J. T. Stover et al, Alamo Drilling & Leasing Co., Mirando City	6,691.94	5,018.97
Wright-Smith Oil Co., Ardmore, Okla.	9,729.53	8,075.50
Wright, Elsie E., Wichita Falls	213.96	170.20
Wrightsman Oil Co., Tulsa, Okla. (12-31-31)	14,870.80	11,841.65
Y		
Yingling, S. C., for Southern Oil Corp. of America, Winfield, Kans.	18,574.13	7,429.66
Yuba Oil Co., Inc., Nacogdoches	1,030.00	771.50
Z		
Zadie Belle Oil Co., Mineral Wells (12-31-31)	353.52	266.22

Kansas Fields

(Continued from Page 52)

and is expected to handle 50 bbls. per day from each well. The discovery well in the area F. Hollow's No. 1 Church Acre, has been shipping around 300 bbls. a day to the Golden Rule Refinery at Wichita.

In the area surrounding the new wells in the south extension area to the Voshell Pool, in McPherson County, the Western Gasoline Co.'s No. 1 Unruh, SW cor. SE NE Section 21-21-3w, is a new location. Operations are expected to start in the near future. Five new locations have been staked in the vicinity.

The W. C. McBride, Inc.'s No. 1 Friesen, NW cor. SW Section 20-22-3w, was opened during the week and flowed at the rate of 3,600 bbls. a day. It made 137½ bbls. of oil in 35 minutes.

In the Johnson Pool, McPherson County, The Texas Company's No. 1 Tipton, NW cor. NE Section 2-20-3w, flowed 553 bbls. of oil in 16½ hours from the chat at 2,990-3,035 feet. This was the seventh well completed and extends the production a mile east. The well will be pinched to 50 bbls. a day to conform to pipe line demand. Offsets are expected to be started surrounding the well. The Shell Petroleum Corp. has the only pipe line into the field and is taking 50 bbls. a day from each of the wells.

Mid-Kansas Oil & Gas Co.'s No. 1 Etter, NW cor. NE SE Section 3-20-3w, found approximately 400,000 feet of gas in the chat and was drilling deeper to test the Viola lime. The top of the chat was found at 2,964 feet, which was higher than any other well in the Johnson Pool has found the chat. It was considered a disappointment when this well made only a small flow of gas and no oil from the chat. It will be the first well in the pool to test the Viola lime and will be watched with considerable interest.

Vickers' Wildcat Showing

A wildcat test in the northwestern part of Ellsworth County found a showing of oil in the conglomerate. The test was Vickers Petroleum Co. and others' No. 1 Claussen, C SE NW Section 31-15-10w, found the oil at 3,300-02 feet, and was drilling deeper at 3,320 feet.

The wildcat test in Barton County, northwest of Great Bend, is expected to resume operations in a few days. Skelton Oil Co.'s No. 1 Ott, C SE SE Section 16-19-14w, has been shut down while waiting for a new cable. This well found a showing of oil at 3,530-46 feet, and was bottomed at 3,600 feet.

Martin & Washabaugh's No. 1 Yoder, C NW NW Section 15-24-5w, Reno County wildcat test, which has been shut down for approximately a month at a total depth of 318 feet, may resume operations in the near future.

Shell Petroleum Corp. and others' No. 1 Murphy, C NW NE Section 4-19-9w, Rice County, is a new location south of the same operators' No. 1 Ploog, which was completed in August, 1930, as a 2,000-bbl. producer. It was shut in until May of this year and is now averaging around 1,200 bbls. a day, which is being shipped out in tank cars to Canada.

In the Greenwich area of Sedgwick County, on the east side of the county, Rutherford and others' No. 2 well in the SW cor. NW NE Section 6-26-2, pumped 220 bbls. of oil in 10 hours from the chat at 2,987-90 feet.

Cowley County

McNabb and others' No. 1 College, NW cor. SE Section 11-32-4, is a rig. Same operator's No. 1 Snyder, SE cor. SW NW NE Section 27-32-4, is a rig. Slick, Pryor & Lockhart's No. 2 Sitton, SW cor. NW NW, was drilled to a total depth of 2,957 feet and plugged back to sand at 2,906-52 feet and shot with 50 quarts, making 150 bbls. of oil a day.

Ellsworth County

Leo Morgan and others' No. 1 Andrews, NE cor. SW Section 3-17-8w, is a rig. Slick, Pryor & Lockhart's No. 1 Heiken, NE cor. Section 26-17-10w, was completed for 630 bbls. of oil after a 40-quart shot in Silicious lime at 3,243-66 feet. Williams-Moore's No. 1 Stratman, C SW SE Section 23-16-10w, was completed for 350 bbls. of oil and 350 bbls. of water a day from the Silicious lime at 3,388-92 feet.

Greenwood County

Sinclair Prairie Oil Co.'s No. 1 Davis, C S half SE SE Section 6-24-12, was rigging up. Harwood Oil Co.'s No. 4 Carson, NE cor. NW SW NE Section 33-23-11, was dry and abandoned at 2,053 feet. Ward McGinnis' No. 5 Edwards, SE cor. SW NE Section 33-23-11, was dry and abandoned in sand at 1,997-2,040 feet. Gore and Phillips Petroleum Co.'s No. 2 A. Brothers, NE cor. NW NW Section 35-23-11, made 52 bbls. after an 80-quart shot in sand at 1,860-79 feet. Lykes and Empire Oil & Refining Co.'s No. 1 Patterson, C NW SW NW Section 36-23-11, made 75 bbls. of oil from sand at 1,846-85 feet after an 80-quart shot.

Harvey County

Olson Drilling Co. and Shell Petroleum Corp.'s No. 1 Day, C SW NW Section 19-23-3w, is a location. Hollow and others' No. 1 Church Acre, (OWDD) old total depth 3,509 feet drilled to 3,512 feet where it made 52 bbls. of oil an hour. McBride and others' No. 1 Friesson, NW cor. SW Section 20-22-3w, flowed 835 bbls. of oil in five hours from the Hunton lime at 3,505-13 feet.

McPherson County

McBride, Inc.'s No. 1 Neufeldt, NE cor. NW Section 28-21-3w, is a rig. Standard of Kansas' No. 1 West, NW cor. SE SE Section 3-20-3w, was a location. Phillips Petroleum Co.'s No. 1 Smeltzer, C SW SE Section 21-19-1w, was abandoned at a total depth of 3,498 feet.

Marion County

Dieter & Youker's No. 1 Hilback, C SE NE Section 10-17-4, (OWDD) total depth 1,740 feet, was cleaning out.

Sedgwick County

Miller and others' No. 1 Jones, SW cor. Section 26-27-1, was dry and abandoned at a total depth of 1,568 feet.

Stafford County

Midwest Refining Co.'s No. 6 Brock, NW cor. Section 6-23-11w, made 820 bbls. of oil a day from the Silicious lime at 3,533-70 feet.

Reno County

Olson Drilling Co. and Shell Petroleum Corp.'s No. 1 Rudicil, C SW SW Section 24-23-4w, is a location.

Rice County

Shell Petroleum Corp.'s No. 1 Murphy, C NW NE Section 4-19-9w, was a rig on the ground.

Woodson County

Pure Oil Co.'s No. 13 Winterscheid, NE cor. NW Section 6-24-14, was drilling at 390 feet. Ward McGinnis' No. 1 Snyder, SE cor. NE SW Section 31-23-14, is a rig.

PAPICO UNITS STANDARDIZED

Complete reconstruction and simplification of Papico odorizers to effect standardization of the units and adaptability to all requirements of natural gas companies are announced by the engineering department of Pacific Pipe & Supply Co., Los Angeles. The basic principles originally incorporated in the odorizers are embodied in the three new styles. The new units are to be known as types AH, BH, V15 and VS. The AH has a capacity of 300,000 cubic feet per day, BH 1,500,000 cubic feet and V15 over 1,500,000 cubic feet. The two smaller units are of the horizontal type, while the V15 is of a vertical unit construction. Each of the units has capacity for one week's supply of odorant when operated at maximum. All three types are for working pressures to a maximum of 150 pounds with safety factor of five, but type VS can be constructed for any pressure if desired.

CLASSIFIED ADVERTISING

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The rates for Classified Advertisements are 35 cents a line for the first insertion and 25 cents a line for each additional insertion. Six words usually constitute a line. The following table will enable you to figure the cost of your advertisement:

	1 time	2 times	3 times	4 times
3 lines ..	1.05	1.80	2.55	3.30
4 lines ..	1.40	2.40	3.40	4.40
5 lines ..	1.75	3.00	4.25	5.50
6 lines ..	2.10	3.60	5.10	6.60
7 lines ..	2.45	4.20	5.95	7.70
8 lines ..	2.80	4.80	6.80	8.80
9 lines ..	3.15	5.40	7.65	9.90
10 lines ..	3.50	6.00	8.50	11.00

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Compute white space at the above rates.

Mail your Classified Advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

For Sale—Equipment

200 AMP. General Electric Arc Welder; portable; 220 V. 3 ph. 60 cy. Complete. Like new. $350. 7x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $225. 8x6 Ingersoll-Rand Type ER-1 Air Compressor. Like new. $250. 36"x18' Fifield Screw Cutting Lathe. $650. Also large stock of lathes, shapers, pipe machines, bolt threaders, etc. Send for our list. Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West Second St., Cincinnati, Ohio.

PIPE FOR SALE
20,000 ft. 8¼" 28-lb. Used Casing.
30,000 ft. 6⅝" 20-lb. Used Casing.
All Lapwelded, in A-1 condition.
Write or wire
I. Nadel,
134 E. 18th St.,
Tulsa, Okla.

FOR SALE—30 Star Beam Machine, Waukesha Engine, Caterpillar Traction. Fred Kessler or B. J. Chronic, Tulsa, Okla.

If you can't find the kind of equipment you are looking for, insert an ad of your own, telling of your needs.

Equipment Wanted

WANTED—30,000 feet of plain end or screwed pipe from 4 to 10-inch, must be low price. Reply by letter stating shipping point. American Engineering Co., Chatham, Ontario.

GAS ENGINES WANTED—Two 25 H.P. engines for pumping oil wells. Muskegon Pipe Line Co., Muskegon, Mich.

Business Opportunities

ENGINEER wants to place several inventions with manufacturing or sales organization. Equipment for high pressure gas wells. Air lift and siphon apparatus. Pumping equipment especially adapted for East Texas conditions. Demonstration of models in laboratory, or complete written description on request. Address Box F-231, The Oil and Gas Journal, Tulsa, Okla.

Business Opportunities

FOR SALE
Kettleman Hills Field, California. 80 acres fee land within 1½ miles of Felix and Shell-Dixon wells for $150.00 an acre. Box 412, San Luis Obispo, Calif.

OIL located before drilling. Geophysical method. Toggodometer Instrument; take pay in oil. No oil, no pay, except traveling and testing expenses. 95 per cent accuracy. O. P. Coffin, Caddo, Tex.

ESTABLISHED EARNINGS
OIL PRODUCING COMPANY paying large monthly dividends from settled production, invites limited additional capital to drill out proven leases. No proration. Exceptional investment opportunity. Fullest investigation welcomed. Responsible representatives also desired to assist financing.
STEED PRODUCTION COMPANY
Fidelity Building Dallas, Texas

WE ARE organized to serve you—"In Mexico"—Oil, Mines, Lands, Concessions, Divorces.
International Business Bureau,
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